# Mathematics

SCHOOL

## Sindh Textbook Board, Jamshoro

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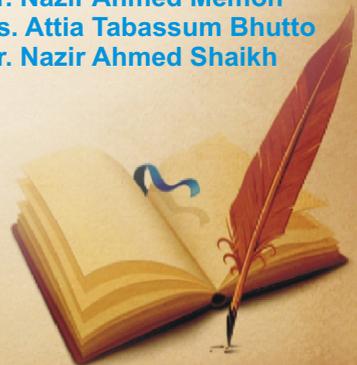
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# PREFACE

The Sindh Textbook Board is an organization charged with the preparation and publication of textbooks in the province of Sindh. Its prime objective is to develop and produce textbooks which are conductive to equip the new generation with the knowledge and acumen to prepare them to face the challenges of the rapidly changing environment. In this age of knowledge explosion and development of technology not witnessed in the human history, efforts have to be made to ensure that our children do not lag behind. The Board also strives to ensure that Universal Islamic Ideology, culture and traditions are not compromised in developing the textbooks.

To accomplish this noble task, a team of educationists, experts, working teachers and friends endeavor tirelessly to develop, text and improve contents, layout and design of the textbooks.

An attempt has made in this textbook to provide horizontal and vertical integration. The efforts of our experts and production personnel can bring about the desired results only if these textbooks are used effectively by teachers and students. Their suggestions will help us in further improving the qualitative contents of textbooks.

Chairman
Sindh Textbook Board

# NUMBERS

## NUMBERS

### Ordinal Numbers

### Write ordinal numbers from first to twentieth

We already know to identify the position of objects by ordinal numbers. Let us revise the ordinal numbers.

**Activity 1** Colour first, third and fifth positions in red.

**Activity 2** Write the missing ordinal numbers.

**Teacher's Note** Teacher should revise and do more practice of ordinal numbers by using students in the class. For example rows/columns of students books, benches/chairs etc.

**Activity 1** Read the positions of the following students.

**Activity 2** Read and trace the following ordinal numbers.

| Ordinal number (in words) | Ordinal number (in figures) |
|---|---|
| First | $1^{st}$ |
| Second | $2^{nd}$ |
| Third | $3^{rd}$ |
| Fourth | $4^{th}$ |
| Fifth | $5^{th}$ |
| Sixth | $6^{th}$ |
| Seventh | $7^{th}$ |
| Eighth | $8^{th}$ |
| Ninth | $9^{th}$ |
| Tenth | $10^{th}$ |

| Ordinal number (in words) | Ordinal number (in figures) |
|---|---|
| Eleventh | $11^{th}$ |
| Twelfth | $12^{th}$ |
| Thirteenth | $13^{th}$ |
| Fourteenth | $14^{th}$ |
| Fifteenth | $15^{th}$ |
| Sixteenth | $16^{th}$ |
| Seventeenth | $17^{th}$ |
| Eighteenth | $18^{th}$ |
| Nineteenth | $19^{th}$ |
| Twentieth | $20^{th}$ |

**Teacher's Note**

Teacher should do practice of ordinal numbers from $1^{st}$ to $20^{th}$ by using flash cards of ordinal numbers in the class.

## Exercise 1

### Read the position of animals:

### (1) Tick (✓) the position of animals shown in the above picture:

| Animal | Position | | |
|---|---|---|---|
| | 6th | 7th ✓ | 8th |
| | 3rd | 4th | 5th |
| | 5th | 6th | 7th |
| | 6th | 7th | 8th |

### (2) Write the position of animals shown in the above picture:

## (3) Write the missing positions of vehicles:

FOOD MART

GROCERIES

5th

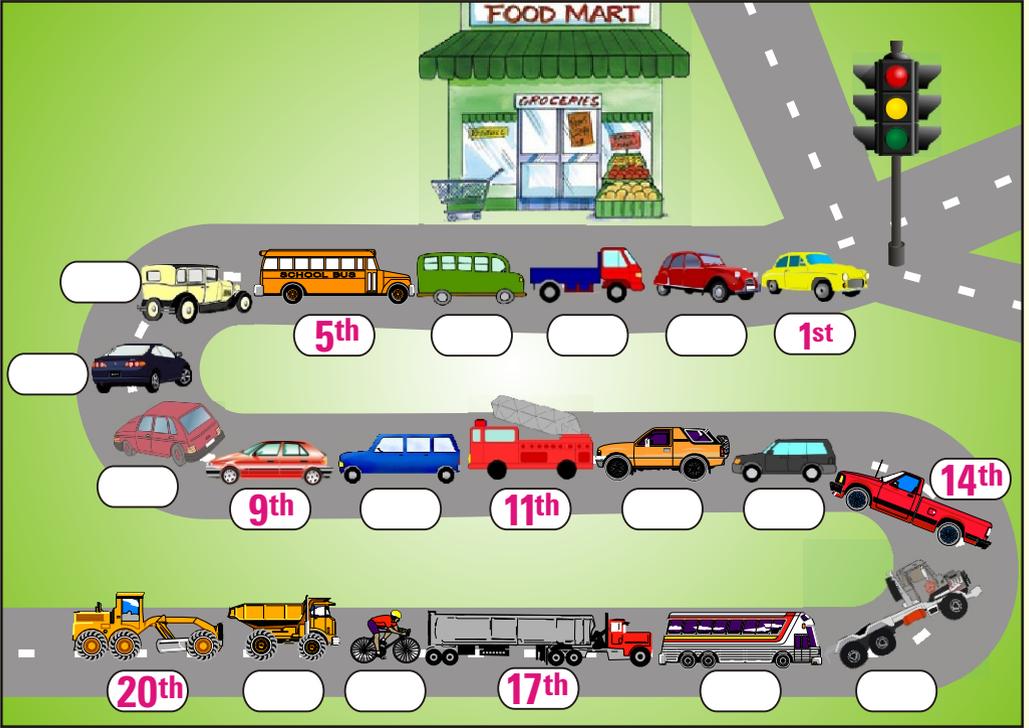
1st

9th

11th

14th

20th

17th

## (4) Write the ordinal number of vehicles in figures and words according to the position shown in the above picture:

| Vehicle | Position | |
|---|---|---|
| | In figures | In words |
| | 2nd | Second |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

# Numbers in words

## Write numbers 1 – 100 in words

Read and trace the numbers 1–50 in words.

| In figures | In words | In figures | In words |
|---|---|---|---|
| 1 | One | 26 | Twenty six |
| 2 | Two | 27 | Twenty seven |
| 3 | Three | 28 | Twenty eight |
| 4 | Four | 29 | Twenty nine |
| 5 | Five | 30 | Thirty |
| 6 | Six | 31 | Thirty one |
| 7 | Seven | 32 | Thirty two |
| 8 | Eight | 33 | Thirty three |
| 9 | Nine | 34 | Thirty four |
| 10 | Ten | 35 | Thirty five |
| 11 | Eleven | 36 | Thirty six |
| 12 | Twelve | 37 | Thirty seven |
| 13 | Thirteen | 38 | Thirty eight |
| 14 | Fourteen | 39 | Thirty nine |
| 15 | Fifteen | 40 | Forty |
| 16 | Sixteen | 41 | Forty one |
| 17 | Seventeen | 42 | Forty two |
| 18 | Eighteen | 43 | Forty three |
| 19 | Nineteen | 44 | Forty four |
| 20 | Twenty | 45 | Forty five |
| 21 | Twenty one | 46 | Forty six |
| 22 | Twenty two | 47 | Forty seven |
| 23 | Twenty three | 48 | Forty eight |
| 24 | Twenty four | 49 | Forty nine |
| 25 | Twenty five | 50 | Fifty |

## Read and trace the numbers 51–100 in words.

| In figures | In words | In figures | In words |
|---|---|---|---|
| 51 | Fifty one | 76 | Seventy six |
| 52 | Fifty two | 77 | Seventy seven |
| 53 | Fifty three | 78 | Seventy eight |
| 54 | Fifty four | 79 | Seventy nine |
| 55 | Fifty five | 80 | Eighty |
| 56 | Fifty six | 81 | Eighty one |
| 57 | Fifty seven | 82 | Eighty two |
| 58 | Fifty eight | 83 | Eighty three |
| 59 | Fifty nine | 84 | Eighty four |
| 60 | Sixty | 85 | Eighty five |
| 61 | Sixty one | 86 | Eighty six |
| 62 | Sixty two | 87 | Eighty seven |
| 63 | Sixty three | 88 | Eighty eight |
| 64 | Sixty four | 89 | Eighty nine |
| 65 | Sixty five | 90 | Ninety |
| 66 | Sixty six | 91 | Ninety one |
| 67 | Sixty seven | 92 | Ninety two |
| 68 | Sixty eight | 93 | Ninety three |
| 69 | Sixty nine | 94 | Ninety four |
| 70 | Seventy | 95 | Ninety five |
| 71 | Seventy one | 96 | Ninety six |
| 72 | Seventy two | 97 | Ninety seven |
| 73 | Seventy three | 98 | Ninety eight |
| 74 | Seventy four | 99 | Ninety nine |
| 75 | Seventy five | 100 | Hundred |

**Teacher's Note** Teacher should give more drill work for writing numbers 1–20, 21–50 and 51–100 in words.

## Exercise 2

**(1) Write the numbers in words:**

| In figures | Numbers in words |
|---|---|
| 35 | Thirty five |
| 75 | |
| 100 | |
| 48 | |
| 29 | |
| 93 | |
| 67 | |
| 89 | |
| 47 | |
| 79 | |

**(2) Join the given numbers in figures with numbers in words:**

| | |
|---|---|
| 64 | Forty |
| 81 | Fifty seven |
| 40 | Ninety six |
| 32 | Fifty nine |
| 57 | Twenty five |
| 59 | Sixty four |
| 96 | Eighty one |
| 89 | Thirty two |
| 25 | Seventy two |
| 72 | Eighty nine |

**Teacher's Note** Teacher is asked to give more drill works besides given activities.

# NUMBERS UP TO 1000

## Place value

### Recognize the place value of a 3-digit number

When we add 1 more in 99, we get **100**. Read as one hundred.

**10 tens = 100.**

***100 is a first 3-digit number.***

**In place value chart we write it as:**

| Hundreds | Tens | Ones |
|---|---|---|
| 1 | 0 | 0 |

**Write the place value of each digit in the given numbers.**

**(1)** In 96 the place value of:
9 is __tens__ and 6 is __ones__.

**(2)** In 354the place value of:
3 is _______, 5 is ______ and 4 is ________.

**Example 1: Count and write in hundreds, tens and ones.**

| Hundreds | Tens | Ones |
|---|---|---|
| | | |
| 6 | 1 | 9 |
| **Six hundred** | **ten** | **nine** |

Six hundred nineteen = **619**

**Teacher's Note** Teacher should help students to recognize the place value of 3-digit numbers and making 3-digit numbers by using different numerals.

## Exercise 3

**(1) Count and write hundreds, tens and ones.**

| | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**(2) Write the digits at their correct places.**

| Number | Hundreds | Tens | Ones |
|---|---|---|---|
| 2 0 8 | 2 | 0 | 8 |
| 1 8 0 | | | |
| 3 7 0 | | | |
| 5 0 0 | | | |
| 6 0 5 | | | |
| 3 4 7 | | | |
| 8 0 0 | | | |
| 9 9 0 | | | |

(3) **Count hundreds, tens, ones and write the number in the box.**

(1) H T O

Hundreds 4 Tens 2 Ones 3 = **423**

(2) H T O

Hundreds Tens Ones =

(3) H T O

Hundreds Tens Ones =

(4) H T O

Hundreds Tens Ones =

(5) H T O

Hundred Tens Ones =

**Teacher's Note** Teacher should use hand made abacus for the students in developing the concept of place values.

## Identify the place value of a specific digit in a 3-digit number

**Example: Identify the place value of encircled digit**

| | |
|---|---|
| 3 4 (5) | The place value of **5** is 5 ones **= 5** |
| 3 (4) 5 | The place value of **4** is 4 tens **= 40** |
| (3) 4 5 | The place value of **3** is 3 hundreds **= 300** |

### Exercise 4

**Write the place value of the digits given in coloured box.**

| No. | Number (coloured digit) | Answer |
|---|---|---|
| (1) | 3 **4** 2 | 4 Tens |
| (2) | **9** 4 6 | ____________ |
| (3) | 9 6 **4** | ____________ |
| (4) | **5** 7 0 | ____________ |
| (5) | 1 **8** 9 | ____________ |
| (6) | 5 0 **1** | ____________ |
| (7) | 3 **3** 3 | ____________ |
| (8) | 5 0 **0** | ____________ |
| (9) | **8** 3 5 | ____________ |
| (10) | 6 **9** 8 | ____________ |

**Teacher's Note**

Teacher should help the students to identify place value of specific digit in 3-digit numbers

## Compare 2- or 3-digit numbers (hundreds, tens and ones)

Colour the smaller number red in each pair.

(1) 24 — 28    61 — 21

(2) 165 — 169    184 — 149

### Exercise 5

**(1) Colour the box of smaller number.**

| 53 | 74 | 36 | 44 | 50 | 60 | 24 | 34 |
|---|---|---|---|---|---|---|---|
| 165 | 213 | 405 | 210 | 314 | 624 | 510 | 810 |

**(2) Colour the box of greater number.**

| 36 | 14 | 25 | 46 | 78 | 96 | 64 | 54 |
|---|---|---|---|---|---|---|---|
| 213 | 423 | 167 | 314 | 210 | 123 | 718 | 218 |

**(3) Colour the box of greater number blue and the smaller number red.**

| 26 | 70 | 13 | 65 | 36 | 81 | 42 | 12 |
|---|---|---|---|---|---|---|---|
| 29 | 79 | 63 | 50 | 84 | 24 | 93 | 56 |
| 412 | 360 | 210 | 910 | 244 | 356 | 112 | 402 |

**Teacher's Note** Teacher should help the students in comparing 2-digit and 3-digit numbers.

## Read and write numbers up to 999 in numerals

### Read numbers from 100 to 199

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |
| 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 |
| 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 |
| 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 |
| 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 |
| 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 |
| 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 |
| 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 |
| 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 |
| 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 |

### Read numbers from 900 to 999.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 |
| 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 |
| 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 |
| 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 |
| 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 |
| 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 |
| 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 |
| 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 |
| 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 |
| 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 |

**Teacher's Note**

Teacher should help the students to read and write numbers of 100–299, 300–399, 400–499,...,900–999.

**Activity 3** Read and write the numbers.

201, 202, ____, ____, ____, ____, ____, ____, ____, 210

351, 352, ____, ____, ____, ____, ____, ____, ____, 360

411, ____, ____, ____, ____, ____, ____, ____, ____, 420

561, ____, ____, ____, ____, ____, ____, ____, ____, 570

721, ____, ____, ____, ____, ____, ____, ____, ____, 730

881, ____, ____, ____, ____, ____, ____, ____, ____, 890

## Exercise 6

**Write the missing numbers:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 300 | 301 | | 303 | | | 306 | | | |
| 430 | | | 433 | | | 436 | | | |
| 500 | | | | 504 | | | | | 509 |
| 661 | | | | | 666 | | | 669 | |
| 683 | | | 686 | | | | 690 | | |
| 748 | | | 751 | | | | 755 | | |
| 777 | | | | | 782 | | | | |
| 816 | | | | 820 | | | | | |
| 894 | | | | 898 | | | | 902 | |
| 990 | | | | | 995 | | | | 999 |

**Teacher's Note** Teacher should help the students to read and write the numbers up to 999.

## Identify numbers given in ascending or descending order

Ascending order means from smaller number to bigger number.

**Which one of the following given numbers are in ascending order?**

| 8 | 23 | 100 |
|---|---|---|
| | ✓ | |

| 100 | 23 | 8 |
|---|---|---|

| 23 | 100 | 8 |
|---|---|---|

| 73 | 42 | 21 | 9 |
|---|---|---|---|

| 9 | 21 | 42 | 73 |
|---|---|---|---|

| 42 | 21 | 9 | 73 |
|---|---|---|---|

| 132 | 112 | 182 | 142 |
|---|---|---|---|

| 182 | 142 | 132 | 112 |
|---|---|---|---|

| 112 | 132 | 142 | 182 |
|---|---|---|---|

**Which one of the following given numbers are in descending order?**

| 13 | 73 | 93 |
|---|---|---|

| 73 | 93 | 30 |
|---|---|---|

| 93 | 73 | 13 |
|---|---|---|
| | ✓ | |

| 34 | 79 | 85 | 58 |
|---|---|---|---|

| 85 | 79 | 58 | 34 |
|---|---|---|---|

| 34 | 58 | 79 | 85 |
|---|---|---|---|

| 165 | 143 | 132 | 156 |
|---|---|---|---|

| 132 | 143 | 156 | 165 |
|---|---|---|---|

| 165 | 156 | 143 | 132 |
|---|---|---|---|

**Teacher's Note**

Teacher should help the students to develop the concept of ascending order from smaller to bigger number and descending order from bigger to smaller number.

## Exercise 7

**(A) Tick (✓) the given set of numbers which are in ascending order:**

(1) 7, 19, 41, 50 ☐

(2) 45, 58, 74, 92 ☐

(3) 54, 47, 32, 25 ☐

(4) 100, 104, 111, 120 ☐

(5) 174, 163, 154, 148 ☐

(6) 224, 250, 216, 232 ☐

**(B) Cross (✗) the given set of numbers which are in descending order:**

(1) 65, 57, 88, 49 ☐

(2) 35, 53, 76, 89 ☐

(3) 94, 72, 61, 50 ☐

(4) 120, 111, 101, 94 ☐

(5) 321, 382, 365, 397 ☐

(6) 481, 474, 467, 459 ☐

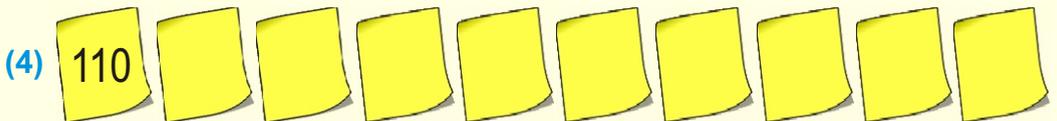
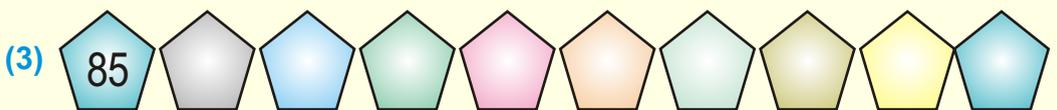
## Count backward ten steps down from any given number

**Example:**

**Count and write the numbers in ten steps down backward.**

**Solution:**

### Exercise 8

**Count and write backward ten steps from the given number.**

(1)
(2)
(3)
(4)
(5)
**Teacher's Note** Teacher should use other examples for developing the concept of backward counting in ten steps down by given number.

## Arrange numbers up to 999, written in mixed form, in increasing or decreasing order

**Activity 1** Arrange the given numbers in increasing order.

| 45 | 59 | 64 | 73 |
|---|---|---|---|

| | | | |
|---|---|---|---|

**Activity 2** Arrange the given numbers in decreasing order.

| 91 | 82 | 78 | 45 |
|---|---|---|---|

| | | | |
|---|---|---|---|

### Exercise 9

Arrange the given numbers in increasing and decreasing order.

**Increasing Order**

**Decreasing Order**

| 35 | 42 | 74 | 89 |
|---|---|---|---|
| | | | |

| 208 | 244 | 218 | 256 |
|---|---|---|---|
| | | | |

| 483 | 428 | 455 | 419 |
|---|---|---|---|
| | | | |

## COUNTING IN TENS AND HUNDREDS

### Count and write in 10s (e.g. 10, 20, 30, ...).

**Example:** **Count and read in tens.**

| 10 | 20 | 30 | 40 | 50 | 60 |
|---|---|---|---|---|---|
| 110 | 120 | 130 | 140 | 150 | 160 |

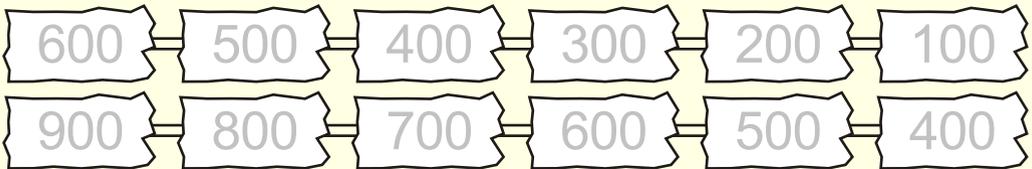
**Exercise 10**

**Count in tens and write the missing numbers:**

| | | | | | | |
|---|---|---|---|---|---|---|
| (1) | 10 | | 30 | 40 | | |
| (2) | 100 | | 120 | | | 150 |
| (3) | 250 | | | | 290 | |

### Count and write in 100s (e.g. 100, 200, 300, ...).

**Example:** **Count the numbers in hundreds and trace the numbers.**

| 600 | 500 | 400 | 300 | 200 | 100 |
|---|---|---|---|---|---|
| 900 | 800 | 700 | 600 | 500 | 400 |

**Exercise 11**

**Count in hundreds a write the missing numbers.**

100, ________, ________, ________, 500,

200, ________, ________, ________, ________,

500, ________, ________, ________, ________,

## Identify the smallest/largest number in a given set of numbers

**Activity** Tick (✓) the smallest number and cross (×) the largest number.

1

Smallest number 14

Largest number 52

2

Smallest number

Largest number

## Exercise 12

**Write the smallest and largest number from given set of numbers.**

1

Smallest number

Largest number

2

Smallest number

Largest number

3

Smallest number

Largest number

4

Smallest number

Largest number

**Teacher's Note** Teacher should help the students to identify the smallest and largest numbers in various given set of numbers.

## Recognize that 1000 is one more than 999 and the first four digit number

**Count and write the number.**

| Hundreds | Tens | Ones | Number |
|---|---|---|---|
| 5 | 2 | 5 | 525 |
| | | | |
| | | | |
| | | | |

When we add **1** more ones in **999**, it makes **1000**.

**10 hundreds** make **One thousand**

We read **one thousand** and write as **1000**

**1000** is the first **4-digit** number.

**Teacher's Note**

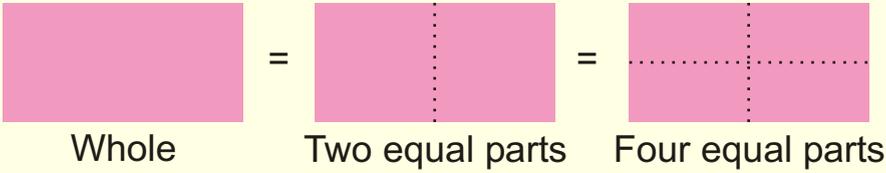
Teacher should help the students to build the concept of 1000 is 1 more than 999 and it is first four digit number.

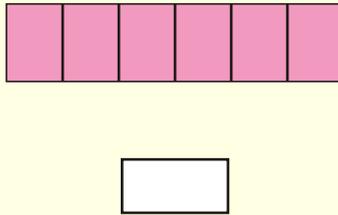
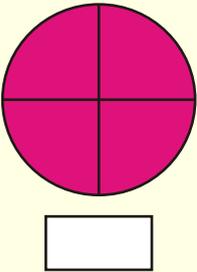
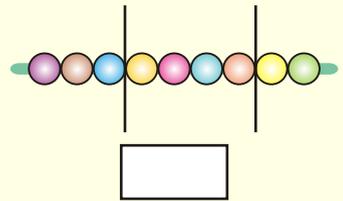
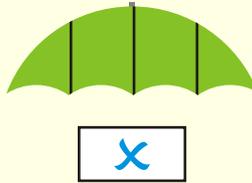
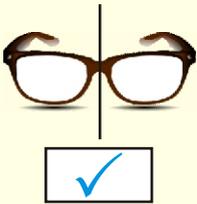
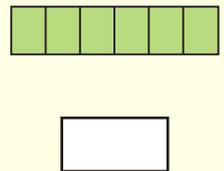
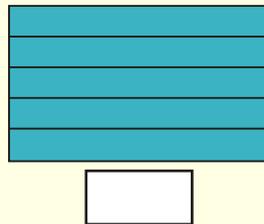
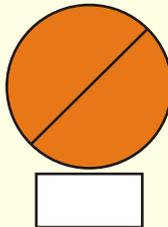
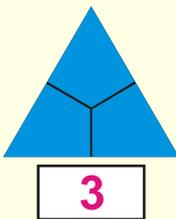
# FRACTIONS

## Recognize fraction as equal parts of a whole

Let rectangle piece of paper be cut into equal parts.

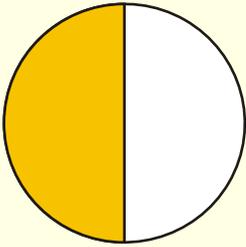
### Equal parts of a whole

Whole Two equal parts Four equal parts

A fraction shows part of a whole when the whole is divided into equal parts.

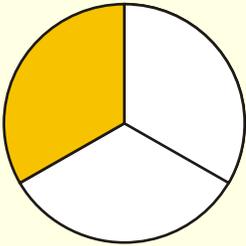
**Activity 1** Tick (✓) for equal parts and cross (✗) for unequal parts of the following:

**Activity 2** Write how many equal parts of a whole are in the following figures.

**Teacher's Note** Teacher should show different objects and cut them into equal parts to explain fractions.

## Identify half, one third and quarter with the help of objects and figures without writing $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$

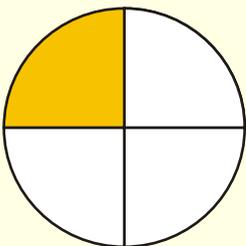
### One-half

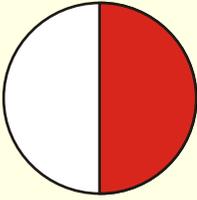
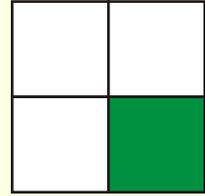
If we divide an object into two equal parts, then each of the part is called **one-half** of it.

This circle is divided into 2 equal parts. One of the two equal parts is called a one-half of the circle.

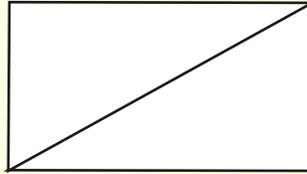
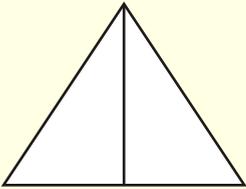
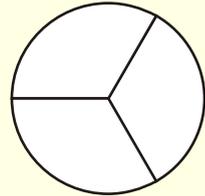
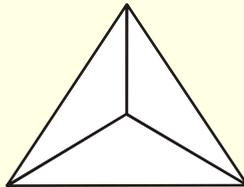
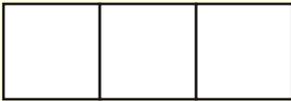
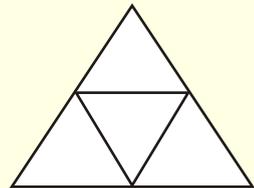
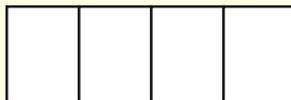
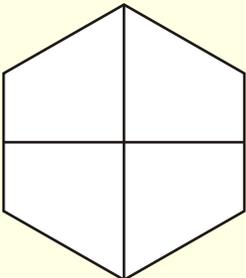
### One-third

If we divide an object into three equal parts, then each of its part is called **one-third** of it.

This circle is divided into 3 equal parts. Each part is one-third of the whole cirlce.

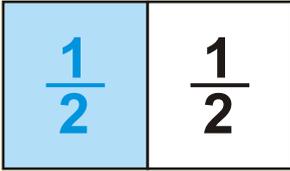
### One-fourth

If we divide an object into four equal parts, then each of its part is called **one-fourth** of it.

This circle is divided into four equal parts. Each part is one-fourth of the whole circle.

## Look at the figures.

one third

a quarter or one-fourth

**Activity 1** Colour one-half of each of the following.

**Activity 2** Colour the one-third of the given objects.

**Activity 3** Colour the one-fourth or quarter of each figure.

**Represent half, one third and quarter in numerical form as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$**

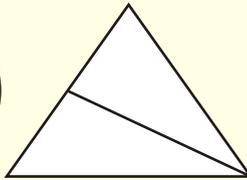
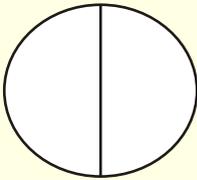
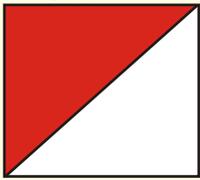
## Numerical form of one - half

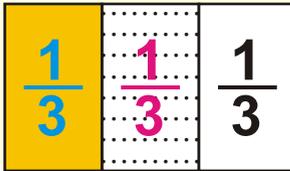
***Numerically we write* one - half *as* $\frac{1}{2}$ .**

$\frac{1}{2}$ means half.

The coloured part of the whole figure is $\frac{1}{2}$ .

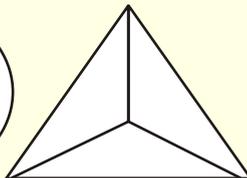
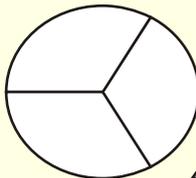
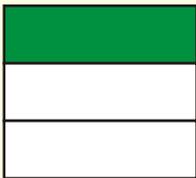
The uncoloured part is also $\frac{1}{2}$ of the whole figure.

**One out of two equal parts is one-half.**

**Colour red $\frac{1}{2}$ of each shape.**

## Numerical form of one - third

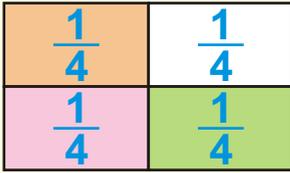
***Numerically we write* one - third *as* $\frac{1}{3}$ .**

$\frac{1}{3}$ means 1 part of equal three parts of a whole figure.

**One out of three equal parts is one-third.**

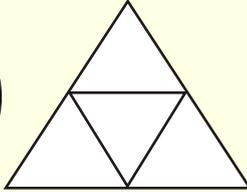
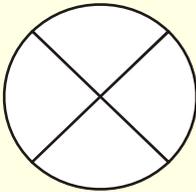
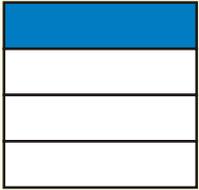
**Colour green $\frac{1}{3}$ of each shape.**

**Teacher's Note**

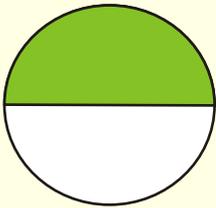
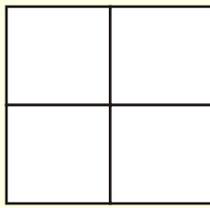
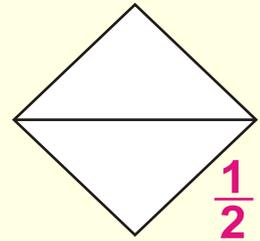
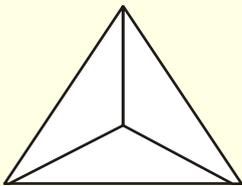
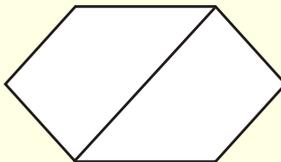
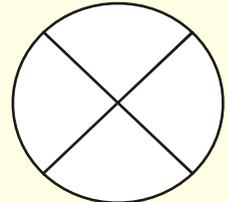
Teacher should explain that $\frac{1}{2}$ means shaded part of 2 equal parts and $\frac{1}{3}$ means one shaded part of 3 equal parts of a whole figure.

## Numerical form of a quarter

*Numerically we write one - fourth as $\frac{1}{4}$.*

$\frac{1}{4}$ means one part of four equal parts of a whole figure

**One out of four equal parts is equal to *one-fourth* or *a quarter*.**

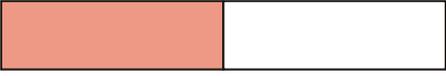
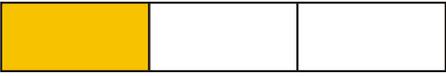
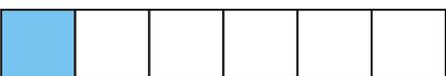
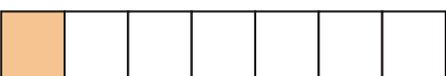
**Activity** Colour blue $\frac{1}{4}$ of each shape.

## Colour the equal parts of a given figure to match a given fraction

**Activity** Colour the parts of the figure according to the given fraction.

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{2}$

$\frac{1}{3}$ $\frac{1}{2}$ $\frac{1}{4}$

**Teacher's Note** Teacher should explain that $\frac{1}{4}$ means one part of 4 equal parts of a whole figure.

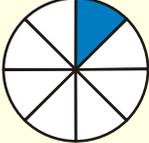
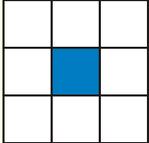
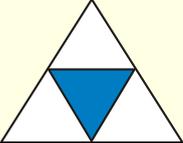
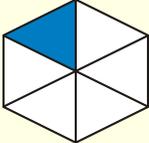
## Recognize and name unit fractions up to $\frac{1}{12}$

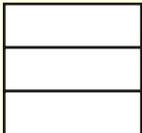
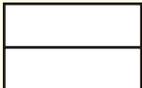
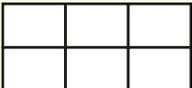
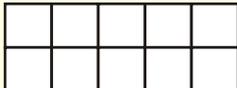
**Look at the equal parts and read the fraction which is coloured.**

| Shape | Equal parts | Fraction | |
|---|---|---|---|
| | | in words | in figures |
| | 2 | one-half | $\frac{1}{2}$ |
| | 3 | one-third | $\frac{1}{3}$ |
| | 4 | one-fourth | $\frac{1}{4}$ |
| | 5 | one-fifth | $\frac{1}{5}$ |
| | 6 | one-sixth | $\frac{1}{6}$ |
| | 7 | one-seventh | $\frac{1}{7}$ |
| | 8 | one-eighth | $\frac{1}{8}$ |
| | 9 | one-ninth | $\frac{1}{9}$ |
| | 10 | one-tenth | $\frac{1}{10}$ |
| | 11 | one-eleventh | $\frac{1}{11}$ |
| | 12 | one-twelfth | $\frac{1}{12}$ |

***When a whole figure is divided into equal parts then one part out of all parts is called unit fraction.***

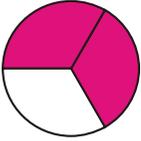
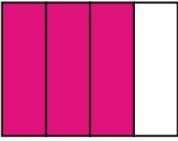
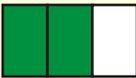
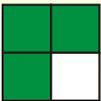
**Teacher's Note** Teacher should perform the above activity in groups of students by using paper strips and other regular objects.

## Exercise 13

**(A) Tick  the correct unit fraction represented by coloured portion.**

(1) $\frac{1}{2}$ $\frac{1}{7}$ $\frac{1}{8}$ ✓

(2) $\frac{1}{7}$ $\frac{1}{9}$ $\frac{1}{12}$

(3) $\frac{1}{3}$ $\frac{1}{7}$ $\frac{1}{4}$

(4) $\frac{1}{8}$ $\frac{1}{6}$ $\frac{1}{5}$

**(B) Colour the given unit fractions.**

(1) $\frac{1}{3}$ (2) $\frac{1}{4}$ (3) $\frac{1}{8}$

(4) $\frac{1}{2}$ (5) $\frac{1}{6}$ (6) $\frac{1}{10}$

## Recognize fractions like two third, three fourth, four fifth and so on using $\frac{2}{3}, \frac{3}{4}, \ldots$

Look at the equal parts and read the fraction represented by coloured portion.

| Shape | Equal Parts | Coloured Parts | Fraction | |
|---|---|---|---|---|
| | | | in words | in figures |
| | 3 | 2 | two-third | $\frac{2}{3}$ |
| | 4 | 3 | three-fourth | $\frac{3}{4}$ |
| | 5 | 4 | Four-fifth | $\frac{4}{5}$ |
| | 6 | 5 | five-sixth | $\frac{5}{6}$ |

**Tick ✔ the right fraction represented by the shaded portion.**

(1)  $\frac{2}{3}$ ✔ $\frac{3}{4}$ $\frac{1}{5}$

(2)  $\frac{4}{9}$ $\frac{3}{4}$ $\frac{7}{9}$

(3)  $\frac{3}{9}$ $\frac{5}{7}$ $\frac{4}{5}$

(4)  $\frac{1}{10}$ $\frac{5}{6}$ $\frac{1}{12}$

## Exercise 14

**Match the picture with correct fraction.**

(1)  $\frac{9}{10}$

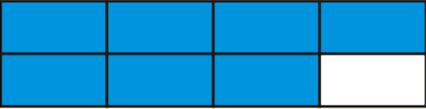
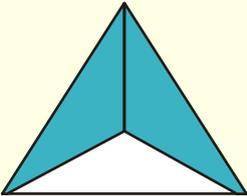
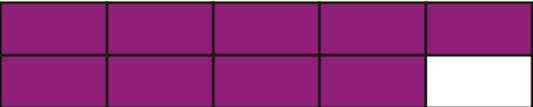
(2)  $\frac{3}{4}$

(3)  $\frac{2}{3}$

(4)  $\frac{4}{5}$

(5)  $\frac{5}{6}$

(6)  $\frac{7}{8}$

(7)  $\frac{6}{7}$

# Unit 2 NUMBER OPERATIONS

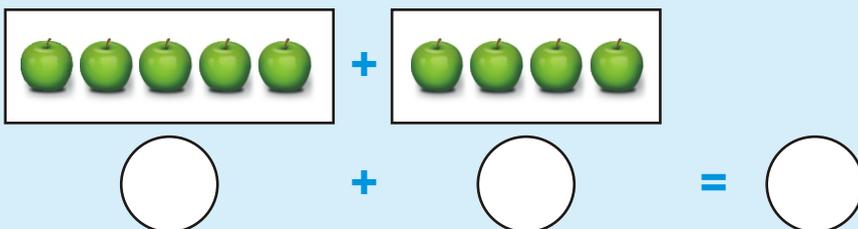
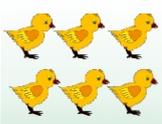
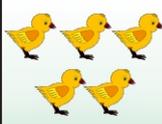
## ADDITION

### Addition of 2-digit numbers (with carrying)

### Add ones and ones

We remember, when we add two numbers, we get their sum.

Addition is to find the sum by combining **two** or **more things**.

**Activity 1** Count and add number of apples in given boxes.

**Activity 2** Count and add the number then the sum of objects in given boxs.

**Teacher's Note**

Teacher will help the students to revise the addition sums by adding ones and ones by using different objects. For example pencils, chalks, notebooks, desks etc. in the classroom.

**Activity 3** Match the answer and colour them as given in box.

| Pink | 16 |
|---|---|
| Red | 15 |
| Dark Blue | 11 |
| Brown | 10 |
| Yellow | 14 |
| Light Blue | 17 |

Solve:
$$\begin{array}{r} 9 \\ +\ 2 \\ \hline 11 \end{array}$$

## Exercise 15

(1) Add:

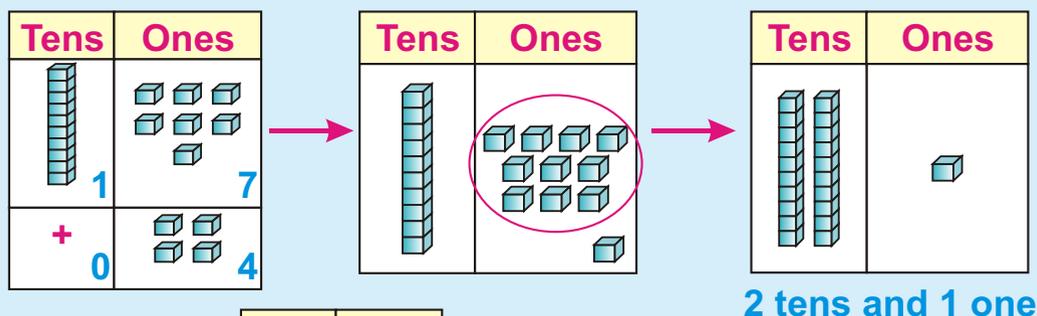
(1)
(2)
(3)
(4)
(5)
(6)
(2) Add and fill in the boxes.

(1) 7 + 7 = 14 (2) 4 + 9 = ☐

(3) 5 + 5 = ☐ (4) 2 + 9 = ☐

## Add ones and 2-digit numbers with carrying

**Example 1:** Add 17 and 4.

**Solution:**

**Step1:**
Add 7 + 4 = 11
Write 1 at ones place and carry 1 ten to tens place.

**Step2:**
Add 1 + 1 = 2
Write 2 at tens place.
Means the 17 + 4 = 21

## Exercise 16

**(A) Add:**

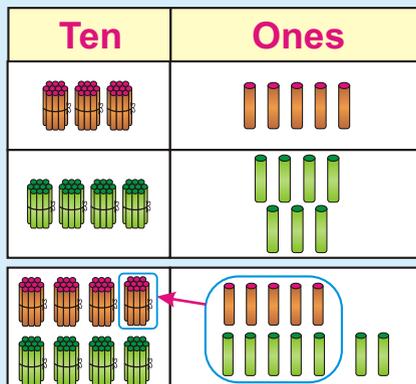
**Teacher's Note**
Teacher will help the students to understand the addition process of 2-digit number with ones by using available objects like stones, match sticks, chalks etc.

## Add 2 digit numbers and 2 digit numbers with carrying

**Example:** Add 35 and 47.

*Solution:*

| Ten | Ones |
|---|---|
| 3 | 5 |
| + 4 | 7 |

| Ten | Ones |
|---|---|
| | |
| | |
| | |

*Step 1*

| Ten | Ones |
|---|---|
| ① 3 | 5 |
| + 4 | 7 |
| | ①2 |

Add **5 + 7 = 12** ones
Write 2 at ones place
and carry **1** to tens place.

*Step 2* *Finally add tens*

| T | O |
|---|---|
| ① 3 | 5 |
| + 4 | 7 |
| 8 | 2 |

or

```
 ①3 5
 +4 7
 ----
  8 2
```

Add tens 1 + 3 + 4 = 8
write 8 below the tens place.

## Exercise 17

**(A) Add:**

| (1) | (2) | (3) | (4) |
|---|---|---|---|
| 1 8 + 1 2 | 2 5 + 1 9 | 3 5 + 4 6 | 6 8 + 2 4 |

| (5) | (6) | (7) | (8) |
|---|---|---|---|
| 3 9 + 5 8 | 4 7 + 2 8 | 4 4 + 4 7 | 7 6 + 1 4 |

**(B) Add and write sum in the boxes:**

(1) 19 + 26 = ☐ (2) 17 + 23 = ☐

(3) 63 + 18 = ☐ (4) 57 + 34 = ☐

**Teacher's Note**

Teacher will help the students to understand the addition process of 2-digit numbers with 2-digit numbers by using lines match sticks, chalks and other available objects.

## Solve real life problems, involving addition of 2-digit numbers with carrying

**Example 1:** There are 18 eggs in one bucket and 9 eggs in an other bucket. How many eggs are there in both buckets?

***Solution:***

| | | |
|---|---|---|
| One bucket contains | (1) 1 8 | eggs |
| An other bucket contains | + 9 | eggs |
| Total | 2 7 | eggs |

### Exercise 18

(1) In a weekly test Rasheeda secured 28 marks in English and 18 marks in Mathematics. Find the total number of marks?

(2) Hira picked 49 flowers and Hina picked 37 flowers. How many flowers did they pick in all?

(3) Zohaib has 65 caryans, he buys 18 more. How many caryans does he have now?

(4) In a cricket test match Naeem scores 64 runs in first inning and 27 runs in second inning. Find the total number of runs scored by Naeem?

(5) Anwar sells 22 eggs on Saturday and 29 eggs on Sunday. How many eggs does he sell in both days?

(6) There are 36 sharpeners in one packet and 27 sharpeners are in an other packet. How many sharpeners are there in both packets?

(7) Sania has Rs 52, her father gives her 19 more rupees. How many rupees does Sania have now?

## Addition of 3-digit numbers without carrying

### Add 3-digit numbers and ones without carrying

Add 123 and 6.

### Exercise 19

**(A) Add:**

| (1) H T O | (2) H T O | (3) H T O | (4) H T O |
|---|---|---|---|
| 1 9 5 | 1 7 4 | 3 6 3 | 4 3 7 |
| + 3 | + 4 | + 6 | + 2 |

| (5) H T O | (6) H T O | (7) H T O | (8) H T O |
|---|---|---|---|
| 5 3 1 | 7 1 0 | 6 3 2 | 2 1 6 |
| + 7 | + 9 | + 7 | + 1 |

**(B) Add and write the sum in the boxes:**

(1) 100 + 2 = ☐ (2) 102 + 3 = ☐

(3) 305 + 4 = ☐ (4) 100 + 4 = ☐

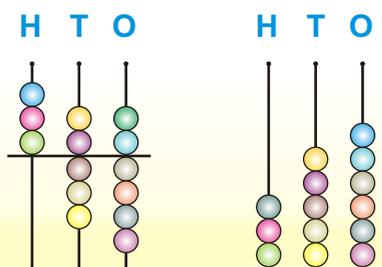
(5) 601 + 7 = ☐ (6) 702 + 6 = ☐

## Add 3-digit numbers and 2-digit numbers without carrying

**Example:** Add 322 and 34.

**Solution:**

| H | T | O |
|---|---|---|
| 3 | 2 | 2 |
| + | 3 | 4 |
| 3 | 5 | 6 |

With the help of abacus.

Thus 322 + 34 = 356

### Exercise 20

**(A) Add:**

| (1) H T O | (2) H T O | (3) H T O | (4) H T O |
|---|---|---|---|
| 1 2 5 | 3 7 5 | 2 8 5 | 2 1 1 |
| + 1 4 | + 2 3 | + 1 3 | + 3 7 |
| ______ | ______ | ______ | ______ |

| (5) H T O | (6) H T O | (7) H T O | (8) H T O |
|---|---|---|---|
| 2 8 9 | 3 3 1 | 7 0 0 | 4 3 2 |
| + 1 0 | + 6 8 | + 9 9 | + 4 4 |
| ______ | ______ | ______ | ______ |

**(B) Tick (✓) the correct answer and cross (×) the wrong answer:**

| | | Correct | Wrong |
|---|---|---|---|
| (1) | 119 + 50 = 159 |  | |
| (2) | 237 + 22 = 359 |  | |
| (3) | 703 + 20 = 723 |  ✓ | |

## Add 3-digit numbers and 3-digit numbers without carrying

**Example:** Add 346 and 143.

### Exercise 21

**Find the sum:**

(1) H T O
108
+100

(2) H T O
306
+200

(3) H T O
230
+205

(4) H T O
183
+114

(5) H T O
215
+151

(6) H T O
333
+222

(7) H T O
550
+330

(8) H T O
302
+507

(9) H T O
725
+134

(10) H T O
673
+225

(11) H T O
576
+103

(12) H T O
837
+162

## Solve real life problems, involving addition of 3-digit numbers, without carrying

**Example:** **Adil buys 242 yellow balloons and his father gave 123 green balloons more. How many balloons had he in all?**

*Solution*

| | H T O |
|---|---|
| Yellow balloons | 2 4 2 |
| Green balloons | + 1 2 3 |
| **Total** | 3 6 5 |

*Or* 242 + 123 = 365

**Exercise 20**

**Add:**

(1)

| | | |
|---|---|---|
| One shelf contains | 2 1 5 | Story books |
| Another shelf contains | + 2 7 1 | Story books |
| Both shelves contain | | Story books |

(2)

| | | |
|---|---|---|
| One jar contains | 1 5 3 | toffees |
| another jar contains | + 2 4 4 | toffees |
| Both jars contain = | | toffees |

(3) Aasma has **331** picture cards. Her sister has **625** picture cards. How many picture cards do both the sisters have in all?

(4) A shopkeeper purchased **523** large kites and **113** kites of medium size. Find the total number of kites he purchased.

(5) There are **450** oranges in a basket and **140** oranges in another basket. How many oranges are there in all?

(6) Kanwal has Rs **130**, she got Rs **115** from her mother. How much many rupees she has in all?

(7) There are **248** chocolates in one packet and **350** in another packet. Find the total number of chocolates?

## Addition of 3-digit numbers with carrying

### Add 3-digit numbers and ones with carrying of tens and hundreds

**Example:** **Add 194 and 7**

**Solution:**

**Step 1:**

**194 =** 1 hundred, 9 tens and 4 ones.
Add ones **4 + 7 = 11 ones**
**11 ones = 1 ten** and **1 one**
write 1 at ones place and carry 1 to tens place

**Step 2:**

Add tens **9 + 1 = 10 tens**
write **0** at tens place and carry 1 to hundreds place

**Step 3:**

Add hundreds **1 + 1 = 2 hundreds**
Write 2 at hundred place

*Hence* **194 + 7 = 201** *or*

$$\begin{array}{r} 194 \\ +\ 7 \\ \hline 201 \end{array}$$

**Teacher's Note** Teacher should help the students to understand the process step by step and make use of abacus or drawing lines.

## Exercise 23

### (A) Add:

| (1) H T O | (2) H T O | (3) H T O | (4) H T O |
|---|---|---|---|
| 3 9 7 | 2 9 9 | 4 9 6 | 3 9 6 |
| + 8 | + 7 | + 9 | + 7 |

| (5) H T O | (6) H T O | (7) H T O | (8) H T O |
|---|---|---|---|
| 6 9 8 | 7 9 7 | 8 9 9 | 4 9 4 |
| + 5 | + 7 | + 3 | + 8 |

| (9) H T O | (10) H T O | (11) H T O | (12) H T O |
|---|---|---|---|
| 3 9 5 | 5 9 3 | 9 4 9 | 5 9 1 |
| + 6 | + 7 | + 9 | + 9 |

### (B) Add and fill the boxes:

(1) 292 + 8 = ☐ (2) 397 + 6 = ☐

(3) 896 + 4 = ☐ (4) 599 + 9 = ☐

(5) 398 + 7 = ☐ (6) 494 + 7 = ☐

(7) 598 + 9 = ☐ (8) 498 + 9 = ☐

(9) 497 + 5 = ☐ (10) 595 + 5 = ☐

## Add 3-digit numbers and 2-digit numbers with carrying of tens and hundreds

**Example:** Add 196 and 45.

*Solution:*

| H | T | O |
|---|---|---|
| 1 | ① 9 | 6 |
| + | 4 | 5 |
| | ① | 1 |

**Step 1:**
196 = 1 hundred, 9 tens and 6 ones
45 = 4 tens and 5 ones
Add ones: 6 + 5 = 11 ones
write 1 at ones place and
carry 1 to tens place

| H | T | O |
|---|---|---|
| ① 1 | ① 9 | 6 |
| + | 4 | 5 |
| ① | 4 | 1 |

**Step 2:**
Now add tens 9 + 4 + 1 = 14 tens
14 tens = 1 hundred and 4 tens.
Write 4 at tens place and carry
1 to hundreds place.

| H | T | O |
|---|---|---|
| ① 1 | ① 9 | 6 |
| + | 4 | 5 |
| 2 | 4 | 1 |

**Step 3:**
Now add hundreds
1 + 1 = 2 hundreds

*Or* 196 + 45 = 241

### Exercise 24

**(A) Find the sum of following:**

(1) H T O
  1 9 5
+  3 9
  2 3 4

(2) H T O
  2 8 7
+  3 7

(3) H T O
  6 5 4
+  6 8

(4) H T O
  3 5 8
+  7 6

(5) H T O
  4 9 9
+  5 5

(6) H T O
  4 9 3
+  1 8

(7) H T O
  9 9 9
+  4 1

(8) H T O
  8 4 5
+  8 7

(9) H T O
  7 8 5
+  2 8

(10) H T O
  6 6 7
+  3 6

(11) H T O
  8 8 2
+  3 8

(12) H T O
  7 9 2
+  9 9

## Add 3-digit numbers and 3-digit numbers with carrying of tens and hundreds

**Example 1:** **Add 234 and 679.**

**Solution:**

***Step 1:*** First add the ones.
**4 + 9 = 13 ones**
Write 3 in ones column.
Carry 1 to tens place.

| O |
|---|
| 4 |
| + 9 |
| 13 |

| H | T | O |
|---|---|---|
| 2 | ①3 | 4 |
| +6 | 7 | 9 |
| | | 3 |

***Step 2:*** Next add the tens.
**1 + 3 + 7 = 11 tens**
Write 1 in tens column.
Carry 1 to hundreds place.

| T |
|---|
| ①3 |
| + 7 |
| 11 |

| H | T | O |
|---|---|---|
| ①2 | ①3 | 4 |
| +6 | 7 | 9 |
| | 1 | 3 |

***Step 3:***
Add hundreds in the last.
**1 + 2 + 6 = 9**
Write 9 in hundreds column.

| H |
|---|
| ①2 |
| + 6 |
| 9 |

| H | T | O |
|---|---|---|
| ①2 | ①3 | 4 |
| +6 | 7 | 9 |
| 9 | 1 | 3 |

*Thus*

| | H | T | O |
|---|---|---|---|
| | ①2 | ①3 | 4 |
| + | 6 | 7 | 9 |
| | 9 | 1 | 3 |

*Or* **234 + 679 = 913**

**Example 2:** **Add 234 and 386**

**Solution:**

| | H | T | O |
|---|---|---|---|
| | ①2 | ①3 | 4 |
| + | 3 | 8 | 6 |
| | 6 | 2 | 0 |

*Or* **234 + 386 = 620**

## Exercise 25

**Add:**

(1)

| | H | T | O |
|---|---|---|---|
| | 5 | 6 | 5 |
| + | 3 | 6 | 9 |

(2)

| | H | T | O |
|---|---|---|---|
| | 2 | 8 | 7 |
| + | 3 | 2 | 7 |

(3)

| | H | T | O |
|---|---|---|---|
| | 3 | 9 | 5 |
| + | 3 | 7 | 8 |

(4)

| | H | T | O |
|---|---|---|---|
| | 7 | 2 | 9 |
| + | 1 | 7 | 5 |

(5)

| | H | T | O |
|---|---|---|---|
| | 7 | 7 | 7 |
| + | 1 | 9 | 9 |

(6)

| | H | T | O |
|---|---|---|---|
| | 5 | 5 | 5 |
| + | 3 | 9 | 5 |

(7)

| | H | T | O |
|---|---|---|---|
| | 6 | 3 | 3 |
| + | 2 | 6 | 7 |

(8)

| | H | T | O |
|---|---|---|---|
| | 4 | 6 | 8 |
| + | 3 | 3 | 8 |

(9)

| | H | T | O |
|---|---|---|---|
| | 3 | 1 | 9 |
| + | 5 | 9 | 1 |

(10)

| | H | T | O |
|---|---|---|---|
| | 3 | 9 | 2 |
| + | 5 | 8 | 9 |

(11)

| | H | T | O |
|---|---|---|---|
| | 6 | 6 | 3 |
| + | 2 | 5 | 8 |

(12)

| | H | T | O |
|---|---|---|---|
| | 7 | 3 | 1 |
| + | 1 | 7 | 9 |

## Solve real life problems with carrying of tens and hundreds

### Example 1:

**Salma reads 318 pages of a story book in the first week and 219 pages of another story book in the second week. Find the total number of pages read by her.**

### Solution:

Salma reads

| | | |
|---|---|---|
| In first week | 3 ①1 8 | pages |
| In second week | + 2 1 9 | pages |
| Total | 5 3 7 | pages |

### Example 2:

**Ali's father earns 485 rupees on Monday and 466 rupees on Tuesday. How much money he earned in two days?**

### Solution:

Ali's father earns

| | | |
|---|---|---|
| On Monday | ①4 ①8 5 | rupees |
| On Tuesday | + 4 6 6 | rupees |
| Total | 9 5 1 | rupees |

**Teacher's Note**

Teacher should help the students in solving daily life problems and encourage the students to make their own problems.

## Exercise 26

(1) Sadia used **159** red and **244** black buttons for making a design. How many buttons did she use?

(2) A shopkeeper sold **376** litres of milk in first week and **465** litres of milk in second week. How many litres of milk did he sell?

(3) Farzana spent Rs **155** to purchase books and Rs **147** on colour pencils. Find the total amount she spent.

(4) Bisma has **268** computer CD’s and her brother has **153** computer CD’s. How many CD’s they both have altogether?

(5) The price of bat is Rs **395** and the price of ball is Rs **127**. What is the total price of both bat and ball altogether?

(6) There are **289** books on one shelf and **372** books on the other. How many books are there on both shelves?

(7) Ali has Rs **586**, he got Rs **479** from his brother. How many rupees he has now?

(8) Adnan has collected **354** stamps and his sister has **259** stamps. How many stamps they both have altogether?

## COMMUTATIVE PROPERTY

### Verify commutative property with respect to addition (sum should not exceed 100)

Look at this picture of balloons.
The boy has 2 pink balloons in his left hand and 3 blue balloons in his right hand.
He has total (2 + 3 = 5) balloons in both hands.

He now exchange the position of balloons.
He has 3 blue balloons in his left hand, 2 pink balloons in his right hand.
Again he has total 5 balloons (3 + 2 = 5) in his both hands.

In either case the total is 5.
This shows that 2 + 3 = 3 + 2

**Activity 1** Find the total number of mangoes.

*Hence* 4 + 5 = ☐ = 5 + 4

*or* **4 + 5 = 5 + 4**

**Hence the sum of two numbers added in any order, their sum remains the same. We say that addition is commutative.**

**Teacher's Note** Teacher should explain that if we add two numbers in any order, we get the same answer.

**Example 1:** **Add and verify.**

12 + 27 = ☐ = 27 + 12

**Solution:** 12 + 27 = 39 = 27 + 12

*Hence* 12 + 7 = 27 + 12

## Exercise 27

**(A) Verify commutative property of addition:**

(1)

Hence 3 + 4 = 4 + 3

(2)

2
+ 7

Hence ☐ + ☐ = ☐ + ☐

(3)

3
+ 5

Hence ☐ + ☐ = ☐ + ☐

**(B) Verify:**

(1) 8 + 2 = 2 + 8

(2) 9 + 1 = 1 + 9

(3) 28 + 30 = 30 + 28

(4) 24 + 36 = 36 + 24

(5) 42 + 38 = 38 + 42

(6) 40 + 50 = 50 + 40

(7) 45 + 35 = 35 + 45

(8) 31 + 49 = 49 + 31

# SUBTRACTION

## Subtract ones from 2-digit numbers with borrowing

We have already learnt the process of subtraction in class 1.

**Subtraction means to take away.**

**Example:** **Subtract 7 from 23.**

**Solution:** 23 has 2 tens and 3 ones and 7 has 7 ones

**Step 1: Subtraction of ones:**

Since 3 is less than 7,

7 ones can not be taken away from 3 ones.

Borrow 1 ten and convert it in

10 ones and add 3 in it. 10 + 3 = 13

Now subtract 7 ones from 13 ones.

13 – 7 = 6 We get 6 ones.

| T | O |
|---|---|
| 2 | 3 |
| –0 | 7 |

**Step 2: Subtraction of tens:**

After borrowing, the digit

left on tens place is 1

Hence, 23 – 7 = 16

| T | O |
|---|---|
| 1 ~~2~~ | ⑩ 3 |
| –0 | 7 |
| 1 | 6 |

## Exercise 28

**Find the subtraction:**

(1)

| T | O |
|---|---|
| 3 | 7 |
| – | 9 |
| | |

(2)

| T | O |
|---|---|
| 4 | 3 |
| – | 5 |
| | |

(3)

| T | O |
|---|---|
| 6 | 1 |
| – | 8 |
| | |

(4)

| T | O |
|---|---|
| 7 | 4 |
| – | 6 |
| | |

(5)

| T | O |
|---|---|
| 8 | 5 |
| – | 7 |
| | |

(6)

| T | O |
|---|---|
| 3 | 0 |
| – | 4 |
| | |

**Teacher's Note** Teacher should use concrete objects like paper strip or sticks etc. to explain the concept of borrowing and breaking up tens into ones.

## Subtract 2-digit numbers from 2-digit numbers with borrowing

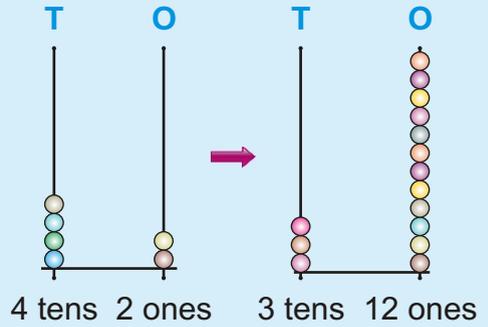
**Example:** **Subtract 26 from 42.**

**Solution:**

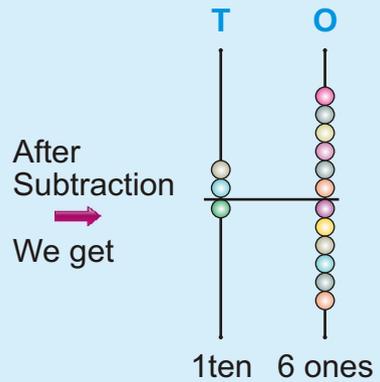
### Step 1: Subtraction of noes

6 ones can not be taken away from 2 ones

We borrow 1 ten from 4 tens
4 tens = 3 ten + 10 ones

Now add 10 ones to 2 ones
Therefore, 10 ones + 2 ones = 12 ones

Now subtract 6 ones from 12 ones
12 ones – 6 ones = 6 ones
Write 6 at ones place

### Step 2:Subtraction of tens

Finally subtract 2 tens from 3 tens
**3 tens – 2 tens = 1 tens**
Write 1 at tens place

| T | O |
|---|---|
| 3 ~~4~~ | ⑩ 2 |
| – 2 | 6 |
| 1 | 6 |

Thus 42 – 26 = **16**

## Exercise 29

### (A) Subtract:

(1)
| | T | O |
|---|---|---|
| | 3 | 2 |
| – | 1 | 5 |

(2)
| | T | O |
|---|---|---|
| | 7 | 0 |
| – | 2 | 5 |

(3)
| | T | O |
|---|---|---|
| | 9 | 0 |
| – | 3 | 1 |

(4)
| | T | O |
|---|---|---|
| | 7 | 6 |
| – | 4 | 7 |

(5)
| | T | O |
|---|---|---|
| | 8 | 0 |
| – | 5 | 2 |

(6)
| | T | O |
|---|---|---|
| | 4 | 2 |
| – | 2 | 4 |

(7)
| | T | O |
|---|---|---|
| | 6 | 7 |
| – | 4 | 8 |

(8)
| | T | O |
|---|---|---|
| | 5 | 5 |
| – | 2 | 8 |

(9)
| | T | O |
|---|---|---|
| | 8 | 0 |
| – | 3 | 2 |

(10)
| | T | O |
|---|---|---|
| | 7 | 5 |
| – | 5 | 7 |

(11)
| | T | O |
|---|---|---|
| | 8 | 9 |
| – | 7 | 8 |

(12)
| | T | O |
|---|---|---|
| | 7 | 0 |
| – | 5 | 1 |

### (B) Solve:

(13) 82 – 36 = ☐ (14) 72 – 18 = ☐

(15) 53 – 29 = ☐ (16) 44 – 15 = ☐

(17) 35 – 27 = ☐ (18) 90 – 82 = ☐

(19) 95 – 77 = ☐ (20) 66 – 49 = ☐

(21) 37 – 28 = ☐ (22) 85 – 18 = ☐

## Solve real life problems of subtraction with borrowing

**Example 1:**

Ayaz has **20** oranges. He sold **7** oranges.

How many oranges are left?

***Solution:***

| | | |
|---|---|---|
| Ayaz has | 20 | oranges |
| He sells | – 7 | oranges |
| Left | 13 | oranges |

Method

| T | O |
|---|---|
| ~~2~~ 1 | (10) 0 |
| – 0 | 7 |
| 1 | 3 |

Thus **20 – 7 =** 13 oranges left

**Example 2:**

Rabia is **33** years old and Khalida is **19** years old. What is the difference between the ages of Rabia and Khalida?

***Solution:***

| | | |
|---|---|---|
| Age of Rabia | 33 | years |
| Age of Khalida | – 19 | years |
| Difference | 14 | |

Method

| T | O |
|---|---|
| ~~3~~ 2 | (10) 3 |
| – 1 | 9 |
| 1 | 4 |

Thus **33 – 19 =** 14 is the difference between their ages.

## Exercise 30

(1) Danish purchased **32** oranges. His brother ate **3** of them. How many oranges does Danish have now?

(2) Zarina had **23** hens and she gave **5** to her sister. How many hens are left with her?

(3) Faraz has **12** kites of red and blue colour. If **7** of these are red. How many kites are of blue colour?

(4) Nadeem earned **15** points in racing. He needs **32** points to win. How many more points he must earn to win?

(5) Areeba found **45** snail shells on sea shore. She uses **18** of these for making a pattern. How many snail shells are left there?

(6) Kanwal had **25** flowers. Only**16** used to make for bucket. How many flowers does she have?

(7) Mr. Kareem planted **32** radish seeds. The birds ate **8** of them. How many radish seeds are left?

(8) Paras has **82** sweets. Her brother has **35** fewer than Paras. How many sweets does her brother have?

(9) Bisma purchased **36** bananas. Her sister took **18** of them. How many bananas did left with Bismah ?

(10) Saleem had **33** parrots, he gave **24** to his brother. How many parrots he had left?

## Subtraction of 3 digit numbers without borrowing

### Subtract ones from 3-digit numbers without borrowing

**Example:** Subtract 7 from 269.

**Solution:**

Thus 269 – 7 = 262

**Exercise 31**

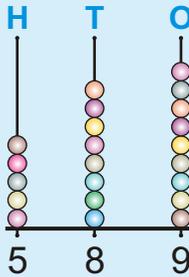
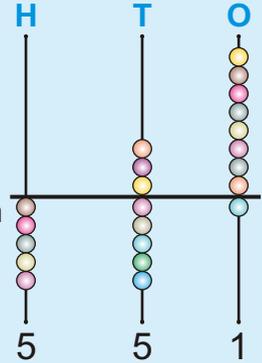
**(A) Subtract the following:**

**(B) Tick (✓) the correct and cross (×) the incorrect:**

## Subtract 2-digit numbers from 3-digit numbers without borrowing

**Example:** Solve 589 – 38

**Solution:**

The abacus shows the number 589

After Subtraction

## Exercise 32

### (A) Solve:

(1) H T O
675 – 64

(2) H T O
487 – 76

(3) H T O
399 – 88

(4) H T O
431 – 20

(5) H T O
888 – 88

(6) H T O
567 – 60

(7) H T O
978 – 43

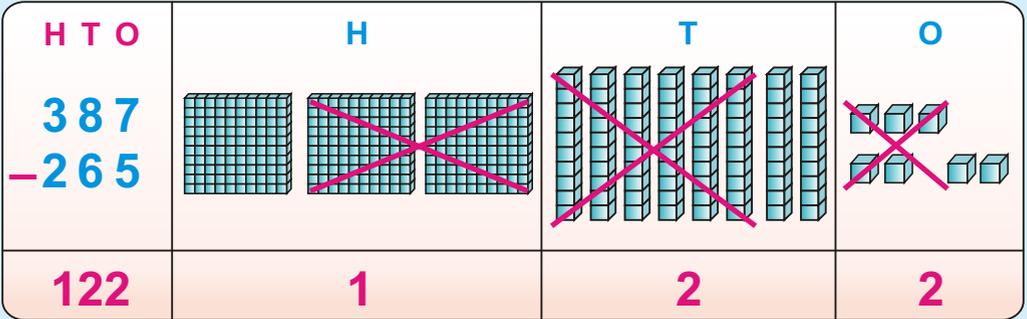
(8) H T O
336 – 23

### (B) Solve and match the correct answer from column 'A' to column 'B':

| Column 'A' | Column 'B' |
|---|---|
| (1) 125 – 20 = ☐ | ☐ = 561 – 31 |
| (2) 235 – 14 = ☐ | ☐ = 137 – 32 |
| (3) 385 – 71 = 314 | ☐ = 677 – 77 |
| (4) 566 – 36 = ☐ | ☐ = 247 – 26 |
| (5) 666 – 66 = ☐ | 314 = 395 – 81 |

## Subtract 3-digit numbers from 3-digit numbers without borrowing

**Example:** Solve 387 – 265

**Solution:**

*Hence* 387 – 265 = 122

### Exercise 33

**(A) Find the difference:**

(1) H T O
 2 7 6
–1 6 3

(2) H T O
 3 6 9
–2 3 2

(3) H T O
 6 6 6
–6 4 3

(4) H T O
 7 2 5
–3 0 4

(5) H T O
 9 9 9
–4 4 4

(6) H T O
 8 8 3
–2 6 2

(7) H T O
 5 5 6
–3 1 2

(8) H T O
 4 2 8
–1 1 5

**(B) Solve:**

(1) 257 – 141 = ☐

(2) 385 – 383 = ☐

(3) 467 – 157 = ☐

(4) 500 – 400 = ☐

(5) 611 – 600 = ☐

(6) 733 – 730 = ☐

## Solve real life problems of subtraction without borrowing

**Activity** **Saima bought a pair of shoes for Rs 238. Raza bought a pair of shoes for Rs 225. What is the difference in paid amounts?**

***Solution:***

| | Rupees |
|---|---|
| Saima paid | 238 |
| Raza paid | – 225 |
| Difference | 013 |

| H | T | O |
|---|---|---|
| 2 | 3 | 8 |
| –2 | 2 | 5 |
| 0 | 1 | 3 |

The difference in price is **Rs 13.**

### Exercise 34

**(1)** Nazir scored **137** runs in the cricket match. Saleem scored only **26** runs. What is the difference in both scores?

**(2)** There were **256** toffees in the jar. Now there are only **144** toffees. How many toffees are missing?

**(3)** Mr. Akram invited **299** peoples in the party. Only **242** people came. How many people did not come to the party?

**(4)** The Rizwan book store purchased **986** books. The next day, **763** books out of them were sold. How many left?

**(5)** One of the book shelves can hold **265** books. A store keeper puts **153** books on the shelf. How many more books can be put on the shelf?

**(6)** Kiran had Rs **765**. She spent Rs **545** on clothes. How much money had left?

**(7)** Farah used **273** roses and **62** tulips for a bouquet. How many more roses than tulips she used?

## Subtraction of 3-digit numbers with borrowing

### Subtract ones from 3-digit numbers with borrowing

**Example 1:** **Solve 841 – 9**

***Solution:***

Ones are subtracted from ones

***Step 1:*** 9 ones can not be taken away from 1 ones borrow 1 tens.
1 ten = 10 ones
Therefore 10 + 1 = 11 ones
Subtraction of ones: 11 – 9 = 2 ones,
write 2 at ones place.

| H | T | O |
|---|---|---|
| 8 | 4 | 1 |
| – | | 9 |

| H | T | O |
|---|---|---|
| 8 | ³~~4~~ | ⑩1 |
| – | | 9 |
| | | 2 |

***Step 2:*** After borrowing one tens
we get 4 tens-1tens = 3 tens
There is 8 at hundreds place.

| H | T | O |
|---|---|---|
| 8 | ³~~4~~ | ⑩1 |
| – | | 9 |
| 8 | 3 | 2 |

*Thus* 841 – 9 = **832**

## Exercise 35

**(A) Solve:**

**(B) Complete:**

(1) 552 – 3 = ☐ (2) 902 – 8 = ☐
(3) 303 – 5 = ☐ (4) 507 – 9 = ☐
(5) 685 – 8 = ☐ (6) 703 – 4 = ☐

## Subtract 2-digit numbers from 3-digit numbers with borrowing

**Example : Solve 739 – 64**

*Solution:*

Write the numbers in place value form.

739 = 7 hundreds + 3 tens + 9 ones

*Or* 739 = 700 + 30 + 9

64 = 6 tens + 4 ones

*or* 64 = 60 + 4

| H | T | O |
|---|---|---|
| 7 | 3 | 9 |
| – | 6 | 4 |
| | | |

***Step 1:***

Subtract ones from ones

9 ones – 4 ones = 5 ones

Write 5 at ones place

| H | T | O |
|---|---|---|
| 7 | 3 | 9 |
| – | 6 | 4 |
| | | 5 |

***Step 2:***

Subtract tens from tens.

6 can not be taken away from 3.

Therefore borrow one hundred for tens.

1 hundred = 10 tens

Now subtract 6 tens from 13 tens

13 tens – 6 tens = 7 tens

Write 7 at tens place

| H | T | O |
|---|---|---|
| 6 ~~7~~ | ⑩3 | 9 |
| – | 6 | 4 |
| | 7 | 5 |

***Step 3:***

After borrowing 1 hundred from 7 hundreds.

6 hundred is left.

Finally subtract hundreds from hundreds.

6 hundreds – 0 hundreds = 6 hundreds

Write 6 at hundreds place

| H | T | O |
|---|---|---|
| 6 ~~7~~ | ⑩3 | 9 |
| –0 | 6 | 4 |
| 6 | 7 | 5 |

Thus **739 – 64 = 675**

**Solve.**

900 – 84 = ☐

| H | T | O |
|---|---|---|
| 9 | 0 | 0 |
| – | 8 | 4 |

**Step 1:** Subtract ones

| H | T | O |
|---|---|---|
| 8 ~~9~~ | ⑩ 0 | 0 |
| – | 8 | 4 |

**Step 2:**

| H | T | O |
|---|---|---|
| 8 ~~9~~ | ⑩ 9 ~~0~~ | ⑩ 0 |
| – | 8 | 4 |

**Step 3:** Subtract tens

| H | T | O |
|---|---|---|
| 8 ~~9~~ | ⑩ 9 ~~0~~ | ⑩ 0 |
| – | 8 | 4 |

*Thus* 900 – 84 = ☐

## Exercise 36

**(A) Solve:**

(1)

| H | T | O |
|---|---|---|
| 2 | 3 | 5 |
| – | 4 | 6 |

(2)

| H | T | O |
|---|---|---|
| 5 | 6 | 7 |
| – | 8 | 8 |

(3)

| H | T | O |
|---|---|---|
| 3 | 8 | 8 |
| – | 9 | 9 |

(4)

| H | T | O |
|---|---|---|
| 6 | 6 | 6 |
| – | 7 | 7 |

(5)

| H | T | O |
|---|---|---|
| 6 | 5 | 3 |
| – | 9 | 2 |

(6)

| H | T | O |
|---|---|---|
| 7 | 6 | 0 |
| – | 8 | 1 |

(7)

| H | T | O |
|---|---|---|
| 7 | 0 | 3 |
| – | 9 | 5 |

(8)

| H | T | O |
|---|---|---|
| 3 | 3 | 4 |
| – | 9 | 8 |

(9)

| H | T | O |
|---|---|---|
| 4 | 8 | 5 |
| – | 7 | 7 |

**(B) Complete:**

(1) 330 – 45 = ☐　　(2) 560 – 81 = ☐

(3) 446 – 97 = ☐　　(4) 600 – 96 = ☐

## Subtract 3-digit numbers from 3-digit numbers with borrowing

**Example:** **Subtract 294 from 582**

***Solution:*** **Solve 582 – 294 =** ☐

***Step 1:*** Subtraction of ones.

4 ones can not be taken away from 2 ones
Borrow 1 ten from 8 tens.
Add 10 ones to 2 ones, 10 + 2 = 12 ones
12 – 4 = 8 ones, write 8 at ones place.

| H | T | O |
|---|---|---|
| 5 | 8 | 2 |
| –2 | 9 | 4 |
| | | |

| H | T | O |
|---|---|---|
| 5 | 7 ~~8~~ | ⑩ 2 |
| –2 | 9 | 4 |
| | | 8 |

***Step 2:*** Subtraction of tens

After borrowing 1 ten from 8 tens,
7 tens are left. Since 9 can't be taken away from 7 tens,
So we are borrowing 1 hundred
from 5 hundreds, 4 hundreds are left
5 hundreds = 4 hundreds + 10 tens
Add 10 tens and 7 tens, 10+7=17 tens
17 tens – 9 tens = 8 tens
Therefore, write 8 at tens place

| H | T | O |
|---|---|---|
| 5 | 7 ~~8~~ | ⑩ 2 |
| –2 | 9 | 4 |
| | | 8 |

| H | T | O |
|---|---|---|
| 4 ~~5~~ | ⑩ 7 ~~8~~ | ⑩ 2 |
| –2 | 9 | 4 |
| | 8 | 8 |

***Step 3:*** Subtraction of hundreds

After borrowing 1 hundred,
from 5 hundreds, we are left
with 4 hundreds. 4 – 2 = 2 hundreds.
Write 2 at hundreds place.

| H | T | O |
|---|---|---|
| 4 ~~5~~ | 7 ~~8~~ | ⑩ 2 |
| –2 | 9 | 4 |
| | 8 | 8 |

| H | T | O |
|---|---|---|
| 4 ~~5~~ | ⑩ 7 ~~8~~ | ⑩ 2 |
| –2 | 9 | 4 |
| 2 | 8 | 8 |

*Thus* 582 – 294 = **288**

## Exercise 37

### (A) Solve:

### (B) Complete:

(1) 874 – 287 = ☐ (2) 847 – 758 = ☐

(3) 621 – 388 = ☐ (4) 513 – 239 = ☐

(5) 626 – 378 = ☐ (6) 931 – 832 = ☐

## Solve real life problems of subtraction with borrowing

**Example: There are 872 books in the library, students borrowed 198 of them. How many books are left behind?**

***Solution:***

| | | |
|---|---|---|
| In Library | 8 7 2 | books |
| Students borrowed | − 1 9 8 | books |
| Left behind | 6 7 4 | books |

| H | T | O |
|---|---|---|
| 7 ~~8~~ | ⑩6 ~~7~~ | ⑩ 2 |
| − 1 | 9 | 8 |
| 6 | 7 | 4 |

*Hence* 872 – 198 = **674**

### Exercise 38

(1) Ali has **125** chickens, **9** of them are sold. How many chickens are left?

(2) There are **135** shops in a shopping mall. On Friday only **7** shops are open. How many shops are closed?

(3) There are **650** students in a school. If **153** students are in primary section. How many students are in secondary section?

(4) There are **364** students in girls school. **57** students were absent on last Monday. How many students were present on that day?

(5) A mango tree has **137** mangoes. **47** mangoes are picked by children. How many mangoes are left on the tree?

(6) There are **932** books in the library. Students borrowed **155** books. How many books are left behind?

(7) Faraz has Rs **172** in his pocket. He wants to buy a toy car of Rs **181**. How much more money he needs to buy a toy car?

## ADDITION AND SUBTRACTION

### Solve simple problems regarding addition and subtraction with carrying/borrowing in mixed form

**Example 1: After adding 4 more books in my bag, I get 12 books. How many books I had before?**

*Solution*

| T | O |
|---|---|
| 0 ~~1~~ | ⑩2 |
| – | 4 |
| | 8 |

Verification

$8 + 4 = 12$

$$\begin{array}{r} 8 \\ +4 \\ \hline 12 \end{array}$$

Thus number of books are **8**

**Example 2: Nida subtract Rs 25 from amount of Sara, Nida gets Rs 375. What is Sara's amount?**

*Solution*

$$\begin{array}{rrr} H & T & O \\ ^{1} & ^{1}2 & 5 \\ +3 & 7 & 5 \\ \hline 4 & 0 & 0 \end{array}$$

Verification

$400 - 25 = 375$

$$\begin{array}{r} 400 \\ -25 \\ \hline 375 \end{array}$$

Thus Sara's amount is Rs **400**

**Exercise 39**

(1) Iqbal add my number to **7**, Iqbal gets **20**. What is my number?

(2) Anis subtract **14** from Nazir's number, Anis gets **30**. What is Nazir's number?

(3) You add my number to **250,** you get **700**. What is my number?

(4) Salma subtract **320**from Haleema's number, Salma gets **800**. What is Haleema's number?

(5) Akhtar add Aslam's amount to Rs **80**, Akhtar get Rs **300**. What is Aslam's amount?

## MULTIPLICATION

### Recognize multiplication as repeated addition and use of multiplication symbol "x"

Four bicycles are given. Each bicycle has 2 wheels in all.
What is the number of wheels in all?
We do it simply by adding 2 repeatedly.

2 + 2 + 2 + 2 = 8

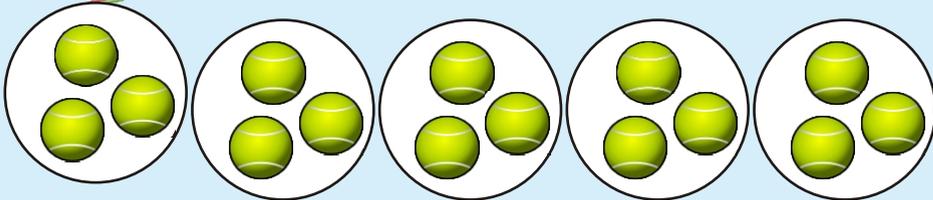
*Or* Four times 2 is written as:

4 x 2 = 8

Read as 2 multiply by 4 is equal to 8.
Repeated addition is called "Multiplication".

Here symbol **"x"** is called the sign of **multiplication**.

**Activity 1** **Count the balls and write.**

_____ + _____ + _____ + _____ + _____ = ☐

**5 times 3 =** ☐

*Or* **5 x 3 =** ☐

**Teacher's Note** Teacher should explain the concept of multiplication through repeated addition by using available objects.

**Activity 2** Count the pencils.

2 times 7 = ____

*Or* 2 x 7 = ____

**Activity 3** How many petals altogether?

____ times ____ = ____

*Or* 5 x 4 = ____

## Exercise 40

**Solve:**

4 x 2 = 2 + 2 + 2 + 2 = 8

3 x 2 = ____ + ____ + ____ = ____

5x10 = ____ + ____ + ____ + ____ + ____ = ____

5 x 5 = ____ + ____ + ____ + ____ + ____ = ____

4 x 5 = ____ + ____ + ____ + ____ = ____

6 x 2 = ____ + ____ + ____ + ____ + ____ + ____ = ____

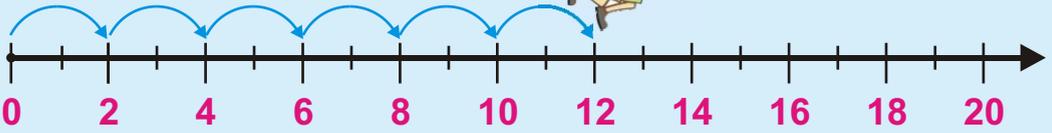
5 x 2 = ____ + ____ + ____ + ____ + ____ = ____

7 x 2 = ____ + ____ + ____ + ____ + ____ + ____ + ____ = ____

## Complete number sequences in steps of 2, 3, 4, 5 and 10 and develop multiplication tables of 2, 3, 4, 5, and 10 till the multiplication 10 x 10

### Counting by 2s

Ali is jumping in 2s.

0 2 4 6 8 10 12 14 16 18 20

Here we have counted the numbers by 2s as:

**2, 4, 6, 8, 10, 12, 14, ...** and so on.

**Activity 1** **Complete by counting 2s.**

| 2 | | | 8 | |
|---|---|---|---|---|
| | 14 | 16 | | |
| 22 | | | | 30 |

**Activity 2** **How many flowers in all?**

3 times 2 = ☐ *Or* 3 x 2 = ☐

**Activity 3** **How many buttons in all?**

4 times 2 = ☐ *Or* ____ x ____ = ☐

## Table of 2.

| Addition table | Way of reading | Multiplication table |
|---|---|---|
| 2 | 1 two is 2 | 1 x 2 = 2 |
| 2 + 2 | 2 twos are 4 | 2 x 2 = 4 |
| 2 + 2 + 2 | 3 twos are 6 | 3 x 2 = 6 |
| 2 + 2 + 2 + 2 | 4 twos are 8 | 4 x 2 = 8 |
| 2 + 2 + 2 + 2 + 2 | 5 twos are 10 | 5 x 2 = 10 |
| 2 + 2 + 2 + 2 + 2 + 2 | 6 twos are 12 | 6 x 2 = 12 |
| 2 + 2 + 2 + 2 + 2 + 2 + 2 | 7 twos are 14 | 7 x 2 = 14 |
| 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 | 8 twos are 16 | 8 x 2 = 16 |
| 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 | 9 twos are 18 | 9 x 2 = 18 |
| 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 | 10 twos are 20 | 10 x 2 = 20 |

**Complete and read aloud the table of 2.**

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 2 | 4 | | | | | | | | |

**Teacher's Note**

Teacher should demonstrate the table of 2 in the classroom. Make groups of children in twos and to develop the table of two.

## Counting by 3s:

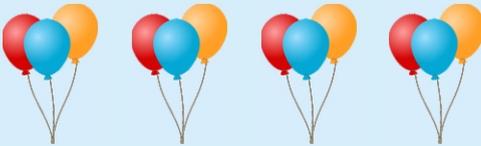
Ali is jumping in 3s.



Here we have counted the numbers by threes as:
3, 6, 9, 12, 15, 18 and so on.

**Activity 1** Complete by counting 3s.



**Activity 2** How many balloons in all?

4 times 3 = ☐ *Or* 4 x 3 = ☐

**Activity 3** How many bananas in all?

6 times 3 = ☐ *Or* 6 x 3 = ☐

## Table of 3.

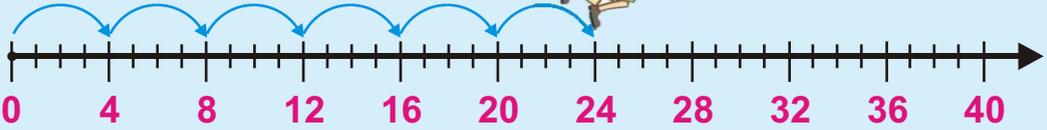
| Addition table | Way of reading | Multiplication table |
|---|---|---|
| 3 | 1 three is 3 | 1 x 3 = **3** |
| 3 + 3 | 2 threes are 6 | 2 x 3 = **6** |
| 3 + 3 + 3 | 3 threes are 9 | 3 x 3 = **9** |
| 3 + 3 + 3 + 3 | 4 threes are 12 | 4 x 3 = **12** |
| 3 + 3 + 3 + 3 + 3 | 5 threes are 15 | 5 x 3 = **15** |
| 3 + 3 + 3 + 3 + 3 + 3 | 6 threes are 18 | 6 x 3 = **18** |
| 3 + 3 + 3 + 3 + 3 + 3 + 3 | 7 threes are 21 | 7 x 3 = **21** |
| 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 | 8 threes are 24 | 8 x 3 = **24** |
| 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 | 9 threes are 27 | 9 x 3 = **27** |
| 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 | 10 threes are 30 | 10 x 3 = **30** |

**Complete and read aloud the table of 3.**

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 3 | | | | | | | | | |

## Counting by 4s:

Ali is jumping in 4s.

0 4 8 12 16 20 24 28 32 36 40

Here we have counted the numbers by fours as:
4, 8, 12, 16, 20 and so on.

**Activity 1** Complete by counting 4s.

4, 8, ___, ___, ___, ___, 28, 32, ___, 40, ___, ___, ___, 56

60, ___, ___, 72, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

**Activity 2** How many wheels in 6 cars?

6 times 4 = ☐ *Or* 6 x 4 = ☐

**Activity 3** How many eggs?

5 times 4 = ☐ *Or* 5 x 4 = ☐

## Table of 4.

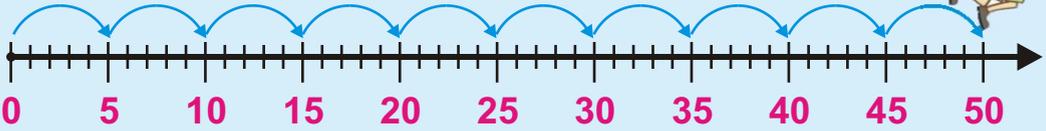
| Addition table | Way of reading | Multiplication table |
|---|---|---|
| 4 | 1 four is 4 | 1 x 4 = **4** |
| 4 + 4 | 2 fours are 8 | 2 x 4 = **8** |
| 4 + 4 + 4 | 3 fours are 12 | 3 x 4 = **12** |
| 4 + 4 + 4 + 4 | 4 fours are 16 | 4 x 4 = **16** |
| 4 + 4 + 4 + 4 + 4 | 5 fours are 20 | 5 x 4 = **20** |
| 4 + 4 + 4 + 4 + 4 + 4 | 6 fours are 24 | 6 x 4 = **24** |
| 4 + 4 + 4 + 4 + 4 + 4 + 4 | 7 fours are 28 | 7 x 4 = **28** |
| 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 | 8 fours are 32 | 8 x 4 = **32** |
| 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 | 9 fours are 36 | 9 x 4 = **36** |
| 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 | 10 fours are 40 | 10 x 4 = **40** |

**Complete and read aloud the table of 4.**

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 4 | | | | | | | | | |

## Counting by 5s:

Ali is jumping in 5s.

0 5 10 15 20 25 30 35 40 45 50

Here we have counted the numbers by fives as:

**5, 10, 15, 20, 25** and so on.

### Activity 1 Count by fives and write.

(one ✿ = 5 ✿)

| 5 | 10 |  | 20 |  |  |  | 40 |
|---|---|---|---|---|---|---|---|

### Activity 2 Complete the table by counting fives.

| 5 |  | 15 |  |  | 30 |  |  | 45 |  |
|---|---|---|---|---|---|---|---|---|---|
| 55 |  |  |  | 75 |  |  | 90 |  |  |
| 105 |  |  | 120 |  |  | 135 |  |  | 150 |

### Activity 3 Start from 5, write the numbers counting by fives upto 60.

| 5 | 10 |  |  |  |  |  |  |  |  |  | 60 |
|---|---|---|---|---|---|---|---|---|---|---|---|

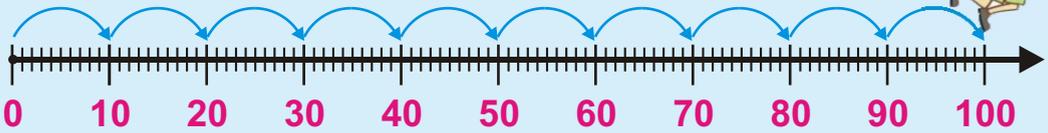
## Table of 5.

| Addition table | Way of reading | Multiplication table |
|---|---|---|
| 5 | 1 five is 5 | 1 x 5 = **5** |
| 5 + 5 | 2 fives are 10 | 2 x 5 = **10** |
| 5 + 5 + 5 | 3 fives are 15 | 3 x 5 = **15** |
| 5 + 5 + 5 + 5 | 4 fives are 20 | 4 x 5 = **20** |
| 5 + 5 + 5 + 5 + 5 | 5 fives are 25 | 5 x 5 = **25** |
| 5 + 5 + 5 + 5 + 5 + 5 | 6 fives are 30 | 6 x 5 = **30** |
| 5 + 5 + 5 + 5 + 5 + 5 + 5 | 7 fives are 35 | 7 x 5 = **35** |
| 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 | 8 fives are 40 | 8 x 5 = **40** |
| 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 | 9 fives are 45 | 9 x 5 = **45** |
| 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 | 10 fives are 50 | 10 x 5 = **50** |

**Complete and read aloud the table of 5.**

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 5 | | | | | | | | | |

## Counting by 10s:

Ali is jumping in 10s.

Here we have counted the numbers by tens as:
**10, 20, 30, 40, 50, 60** and so on.

**Activity 1** **Count by tens and write.**

| 10 | 20 | | | 50 | | | 80 |
|---|---|---|---|---|---|---|---|
| | | 110 | | | | | 160 |
| | | 190 | | 210 | | | |
| 250 | | | 280 | | | 310 | |
| | | 350 | | | | | 400 |

**Activity 2** **Start from 10, write the numbers counting by tens upto 120.**

| 10 | 20 | | | | | | | | | | 120 |
|---|---|---|---|---|---|---|---|---|---|---|---|

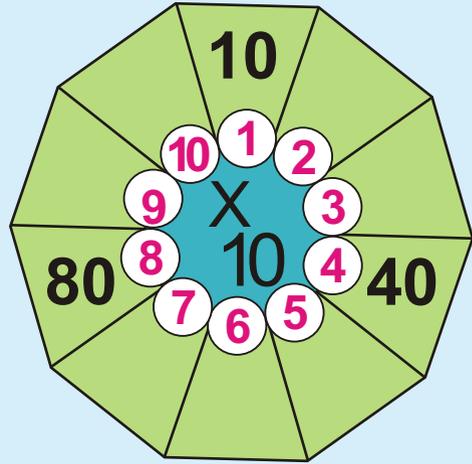
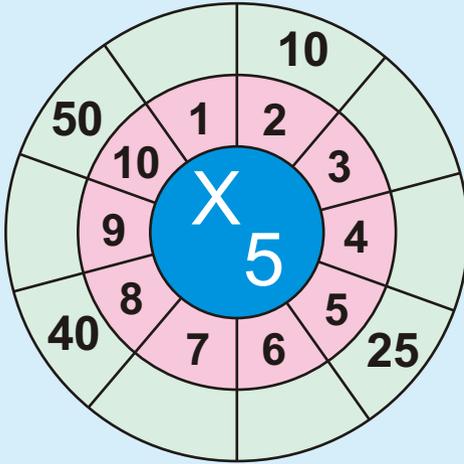
## Table of 10.

| Addition table | Way of reading | Multiplication table |
|---|---|---|
| 10 | 1 ten is 10 | 1 x 10 = **10** |
| 10 + 10 | 2 tens are 20 | 2 x 10 = **20** |
| 10 + 10 + 10 | 3 tens are 30 | 3 x 10 = **30** |
| 10 + 10 + 10 + 10 | 4 tens are 40 | 4 x 10 = **40** |
| 10 + 10 + 10 + 10 + 10 | 5 tens are 50 | 5 x 10 = **50** |
| 10 + 10 + 10 + 10 + 10 + 10 | 6 tens are 60 | 6 x 10 = **60** |
| 10 + 10 + 10 + 10 + 10 + 10 + 10 | 7 tens are 70 | 7 x 10 = **70** |
| 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 | 8 tens are 80 | 8 x 10 = **80** |
| 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 | 9 tens are 90 | 9 x 10 = **90** |
| 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 | 10 tens are 100 | 10 x 10 = **100** |

**Complete and read aloud the table of 10.**

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 10 | | | | | | | | | |

## Exercise 41

### (1) Complete these tables:

| 1 | X 2 | 2 |
|---|---|---|
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

| 1 | X 3 | 3 |
|---|---|---|
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

| 1 | X 4 | 4 |
|---|---|---|
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

### (2) Fill in the boxes:

(1) 7 x 5 = ☐ (2) 4 x 2 = ☐ (3) 9 x 3 = ☐

(4) 9 x 3 = ☐ (5) 8 x 2 = ☐ (6) 8 x 3 = ☐

(7) 10 x 5 = ☐ (8) 6 x 5 = ☐ (9) 5 x 5 = ☐

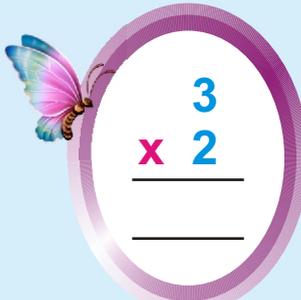
(10) 8 x 3 = ☐ (11) 4 x 10 = ☐ (12) 6 x 4 = ☐

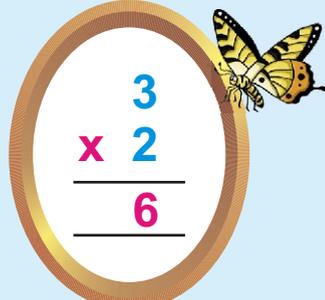
(13) 5 x 10 = ☐ (14) 8 x 4 = ☐ (15) 9 x 2 = ☐

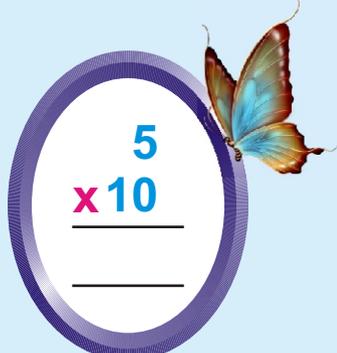
(16) 8 x 7 = ☐ (17) 7 x 10 = ☐ (18) 10 x 10 = ☐

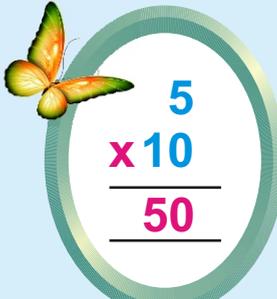
## Multiply numbers within multiplication table

**Example 1:** **Solve 3 x 2**

3 x 2 can also be written as:

Multiply 3 by 2,
we add 3, 2 times
we get 6
*Or* read the table of 2 upto 3, we get 6.

So, 3 x 2 = 6

**Example 2:** **Solve 5 x 10**

5 x 10 can also be written as:

Multiply 5 by 10
we add 10, 5 times
*Or* read the table of 10 upto 5,
we get 50.

So, 5 x 10 = 50

## Exercise 42

**(1) Solve the following.**

**(2) Solve:**

(1)

(2)

(3)

(4)

(5)

5 x 5 = ____

(6)

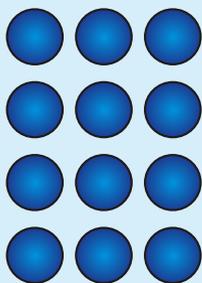
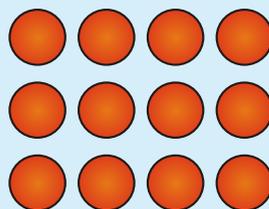
2 x 6 = ____

**(4) Fill in the blanks:**

| | | |
|---|---|---|
| 3 x 2 = ____ | 7 x 5 = ____ | 8 x 2 = ____ |
| 3 x 4 = ____ | 5 x 2 = ____ | 3 x 3 = ____ |
| 9 x 3 = ____ | 8 x 4 = ____ | 6 x 4 = ____ |

**(5)** Start from 30, write the numbers counting by 3s upto 60.

**(6)** Start from 50, write the numbers counting by 10s upto 150.

## Verify commutative property of multiplication

As $3 \times 4 = 12$ $\quad$ $4 \times 3 = 12$

In multiplication, two numbers can be put in any order. The answer will remain the same. This property is known as the **commutative property of multiplication**.

*Example:*

$2 \times 4 = \boxed{8} = 4 \times 2$

$6 \times 3 = \boxed{18} = 3 \times 6$

## Exercise 43

**Verify and complete these as commutative property of multiplication:**

(1) $5 \times 4 = 4 \times \square$

(2) $7 \times 3 = 3 \times \square$

(3) $6 \times 5 = 5 \times \square$

(4) $4 \times 2 = 2 \times \square$

(5) $3 \times 7 = \square \times 3$

(6) $2 \times 8 = \square \times 2$

(7) $9 \times 3 = \square \times 9$

(8) $\square \times 5 = 5 \times 4$

(9) $\square \times 10 = 10 \times 6$

## Solve real life problems on multiplication

**Example: The price of one balloon is Rs 5. Find the price of 3 balloons.**

***Solution:***

The price of 1 balloon is 5 rupees.

The price of 3 balloon is 5 x 3 rupees.

Multiply 3 by 5,

Add 5, 3 times

we read the table of 3 up to 5 times, we get 15.

*So,* 3 x 5 = 15

Hence price of 3 balloons is Rs 15.

### Exercise 44

**(A) Answer the following:**

(1) The price of one eraser is **Rs 6**. Find the price of **5** erasers.

(2) In a plaza, there are **4** rooms in one flat. Find the number of rooms in **8** such flats.

(3) A ceiling fan has **3** wings. How many wings have **10** fans?

(4) A bicycle has **2** wheels. How many wheels have **9** bicycles?

(5) A cow has **4** legs. How many legs have **3** cows?

(6) A child has 10 fingers in his both hands. How many fingers have 6 children?

(7) A shirt has **7** buttons. Find the number of buttons in **5** shirts.

(8) A child has **2** arms. How many arms have **7** children?

(9) In an examination, every child was given **4** pencils. How many pencils have **5** children?

# DIVISION

## Recognize division as successive subtraction and use of division symbol “ ”

**Example 1: 8 Sweets are distributed among 4 girls in such a way that every one gets 2 sweets.**

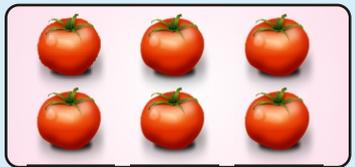
| | |
|---|---|
| 2 sweets are given to Sara | 8 – 2 = 6 (6 left) |
| 2 sweets are given to Shumaila | 6 – 2 = 4 (4 left) |
| 2 sweets are given to Uzma | 4 – 2 = 2 (2 left) |
| The last 2 sweets are given to Bushra | 2 – 2 = 0 (None left behind) |

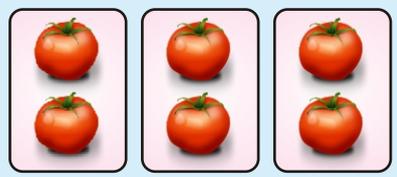
4 times we have subtracted 2 from 8.

We can write as: 8 2 = 4

**The process of repeated subtraction is called division.**
**The symbol of division is “ ”.**

Division is reverse process of multiplication
4 x 2 = 8 **and** 8 2 = 4

**Example 2:** **Look at these pictures.**

6 tomatoes divided in 3 boxes,
we get 2 tomatoes in each.

6 3 = 2

3 boxes of 2 tomatoes each, it makes 6.

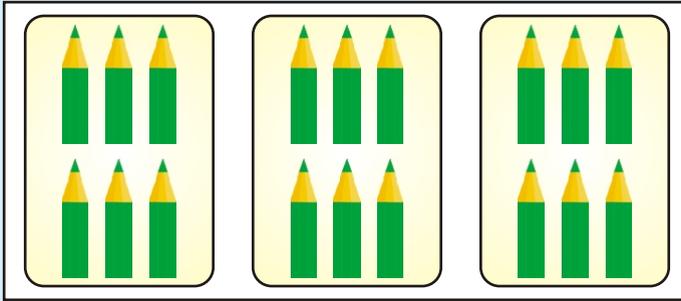
Now 6 tomatoes divided in 2 boxes, we get 3 tomatoes in each.

6 2 = 3

2 boxes of 3 tomatoes each, it makes 6.

**Teacher’s Note**
Teacher should explain example and count numbers of times, a number is subtracted. This number is the answer.

## Divide numbers within the multiplication tables with remainder zero

**Example:** **Solve: 18 3**

*Solution:* **18 3 = 6**

We can also solve as:

***Step 1:***

Here the number

18 written as **dividend** → $\overline{)18}$

***Step 2:***

Number **3** will be written as **divisor** → $3\overline{)18}$

***Step 3:***

Read table of **3** till **18** comes

Now 6 will be written as **quotient** → 6

$$\begin{array}{r} 6 \\ 3\overline{)18} \\ 18 \end{array}$$

***Step 4:***

Now subtract the numbers

we get **0** as **remainder**

$$\begin{array}{r} 6 \\ 3\overline{)18} \\ -18 \\ \hline 0 \end{array}$$

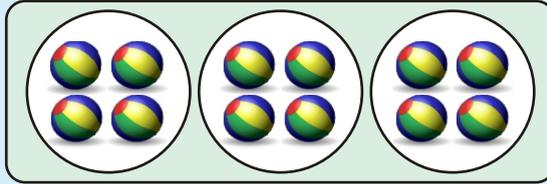
Thus we get **18 3 = 6**

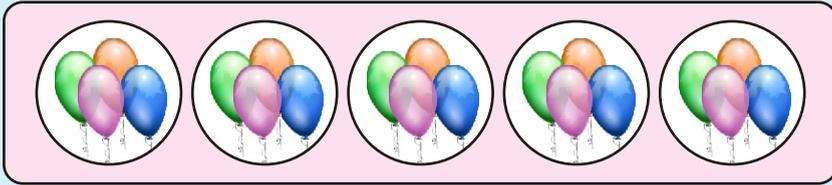
**Teacher's Note** Teacher should help the students understand the solved example on blackboard step by step.

## Exercise 45

### (A) Solve:

(1)

____ ÷ ____ = [ ]

(2)

____ ÷ ____ = [ ]

### (B) Solve:

1. $15 \div 3 = 5$
2. $16 \div 2 =$ [ ]
3. $10 \div 2 =$ [ ]
4. $80 \div 10 =$ [ ]
5. $16 \div 4 =$ [ ]
6. $24 \div 3 =$ [ ]
7. $14 \div 2 =$ [ ]
8. $45 \div 5 =$ [ ]
9. $18 \div 3 =$ [ ]
10. $27 \div 3 =$ [ ]
11. $50 \div 5 =$ [ ]
12. $24 \div 3 =$ [ ]
13. $12 \div 3 =$ [ ]
14. $18 \div 2 =$ [ ]
15. $30 \div 3 =$ [ ]
16. $10 \div 10 =$ [ ]

**(C) Divide:**

1. $3\overline{)12}$ → 4; $-12$; 0
2. $3\overline{)15}$
3. $2\overline{)2}$
4. $3\overline{)24}$
5. $2\overline{)10}$
6. $2\overline{)14}$
7. $3\overline{)27}$
8. $4\overline{)20}$
9. $5\overline{)40}$
10. $4\overline{)36}$
11. $5\overline{)50}$
12. $10\overline{)70}$
13. $5\overline{)40}$
14. $4\overline{)24}$
15. $10\overline{)50}$

## Solve real life problems involving division

**Example:**

**Arif has fixed 4 pictures at one page then how many number of pages will be required for 32 pictures?**

**Solution:**

Total number of pictures = **32**

Fixed on one page = **4**

Therefore **32** **4** = **8** *or*

$$\begin{array}{r} 8 \\ 4\overline{)32} \\ -32 \\ \hline 0 \end{array}$$

*So,* Arif needs **8** pages.

### Exercise 46

(1) **50** sweets were equally divided among **5** children. How many sweets did each child get?

(2) **18** books are divided equally among **2** girls. How many books did each girl get?

(3) **30** guests come to attend a party and they sat an chairs equally in **3** rows. Find the number of chairs in each row.

(4) **15** apples are given to **3** students. Find the number of apples equally divided in each one.

(5) Rafia has **24** stickers, if **4** stickers can be fixed at one page then how many pages does she need to fix all?

(6) If **4** packets contain **28** sweets. How many sweets will be in each packet?

(7) The cost of one pen is Rs **10**. How many same pens can be bought for Rs **80**?

(8) If Rafay covers a distance of **20 km** in **2** days. How much distance does he cover in one day?

# ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION

## Solve real life problems (using Pakistani currency as well) involving addition, subtraction, multiplication and division

In class I we have used Pakistani Coins 1, 2 and 5 and Notes of rupees 10, 20, 50, and 100. Here we will learn and use more about Pakistani currency.

This is a **500** Rupees Note

**Front**

**Back**

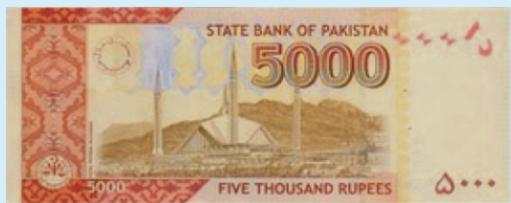
This is a **1000** Rupees Note

**Front**

**Back**

This is a **5000** Rupees Note

**Front**

**Back**

**Teacher's Note**

Teacher should revised the identification of Pakistani currency notes/coins as brain storming activity using real currency.

## Addition and Subtraction

Look at the objects available at a store.

***Example 1:*** Find the total cost of a lamp and helicopter

***Solution:***

| | | |
|---|---|---|
| Lamp cost | = | Rs **550** |
| Helicopter cost | = | + Rs **395** |
| Total cost | = | Rs **945** |

***Example 2:*** How much cost of the school bag is more than the football?

***Solution:***

| | | |
|---|---|---|
| School bag cost | = | Rs **465** |
| Football cost | = | – Rs **210** |
| | | Rs **255** |

The school bag cost is Rs **255** more than the football.

## Exercise 47

### (A) How much do these cost?

(1)
Shoes Rs 499
Football + Rs 210
Total: Rs 709

(2)
Book Rs 350
Doll + Rs 300
Total: Rs

(3)
Football Rs 210
Jeep + Rs 500
Total: Rs

(4)
Helicopter Rs 395
Toy Car + Rs 325
Total: Rs

(5)
Lamp Rs 550
Toy Car + Rs 325
Total: Rs

(6)
Jeep Rs 500
Doll + Rs 300
Total: Rs

### (B) Find the difference of prices.

(1)
Jeep Rs 500
Book − Rs 350
Difference Rs

(2)
Toy Car Rs 325
Doll − Rs 300
Difference Rs

(3)
Shoes Rs 499
Football − Rs 210
Difference Rs

(4)
Helicopter Rs 395
Toy Car − Rs 325
Difference Rs

(5)
Jeep Rs 500
Football − Rs 210
Difference Rs

(6)
Lamp Rs 550
Doll − Rs 300
Difference Rs

## (C) Solve:

(1) On Monday Farah spends two notes of Rs 100 and on Tuesday she spends 1 note of 500. How much does she spend in all?

(2) Raza bought a football in Rs 250, a book in Rs 135 and a cake in Rs 350. How much amount did he pay?

(3) The price of cake is Rs 365 and the price of chocolate box is Rs 150. What is the total price of both?

(4) Abeer has Rs 100. She gives to her sister Rs 25. How much money is left with her?

(5) Ahmer buys a bicycle for Rs 680. He pays Rs 500 only. How much more must he pay?

(6) Sana has Rs 200. She spends Rs 145 on shopping. How much money is left with her?

## Multiplication

### Example:

**The cost of a pencil is Rs 10. What is the cost of 8 pencils?**

*Solution:*

| | | |
|---|---|---|
| 1 pencil cost | = | 10 |
| 8 pencils will cost | = | x 8 |
| Total cost | = | 80 |

Thus, The cost of 8 pencils = Rs 80.

## Exercise 48

(1) The price of a biscuit is Rs 5. What is the cost of 6 such biscuits?

(2) The cost of an eraser is Rs 8. What is the cost of 4 such erasers?

(3) The price of a notebook is Rs 10. What is the cost of 9 such notebooks?

(4) The cost of a packet of chips is Rs 7. What is the cost of 5 such packet of chips?

(5) The price of a scale is Rs 6. What is the price of 3 such scales?

(6) The cost of a banana is Rs 9. Find the cost of 2 bananas.

### Division:

**Example: The cost of 2 pencils is Rs 16. Find the cost of one pencil.**

***Solution:*** The cost of 2 pencils is Rs 16

The cost of 1 pencil will be Rs (16   2)

16   2 = 8   Read table of 2 till we get 16.

2 x 8 = 16

## Exercise 49

(1) The cost of 3 erasers is Rs 18. Find the cost of one eraser.

(2) The price of 4 ball points is Rs 40. What is the price of one ball point?

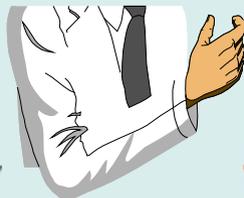
(3) The cost of 5 balls is Rs 35. Find the cost of one ball.

(4) The cost of 10 brushes is Rs 100. What is the cost one brush?

(5) The cost of 4 flowers is Rs 16. Find the price of one flower?

# MEASUREMENT OF LENGTH, MASS AND CAPACITY

## MEASUREMENT OF LENGTH

We can measure the length of different objects by using the informal units like handspan, walking step, pencil, stick and pieces of threads etc.

**Handspan** **Step** **Cubit** **Foot**

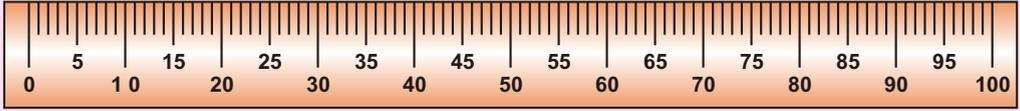
Measurement of length of object by using these units is not exact. So, we use units of length which give us exact measurements.

**Activity** Collect these objects in your classroom. How many paper clips ( ) used in each case for measuring the objects?

| Objects | Measurement |
|---|---|
| (chalk) | 2 |
| (sharpener) | ______ |
| (pencil) | ______ |
| (paint brush) | ______ |

## Recognize, read and write standard units of length including abbreviations

Metre is the basic unit of length. We write "m" for metres. We measure the length of long things in metre. We measure the length of small things in centimetres. We write "cm" for centimetres. A metre is divided into 100 equal parts, each part is equal to 1 cm.

### Metre scale

**1m = 100cm**

**Activity 1** **Write the correct unit (m or cm) used to measure the following.**

(1) Length of a  is measured in 

(2) Length of a is measured in 

(3) A piece of  used for your dress is measured in 

(4) Height of a  is measured in

**Teacher's Note**

Teacher should explain the concept of standard units of measuring length. Teacher should show the metre scale in class and also draw the scale on the wall in the classroom.

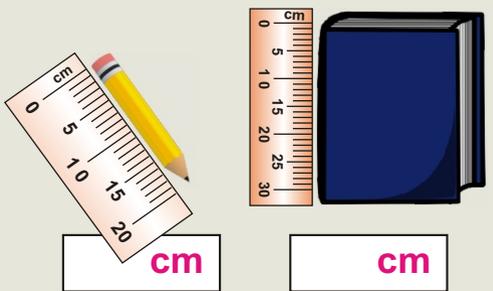
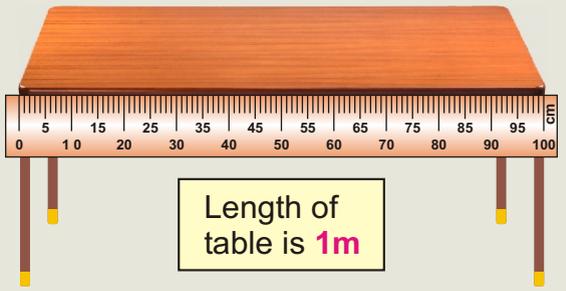
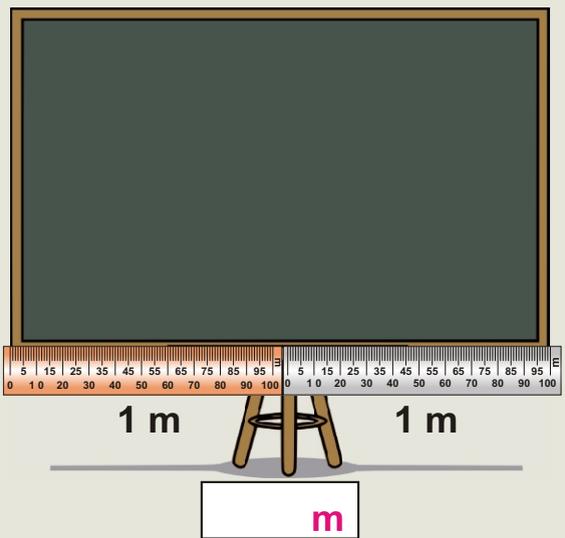
Activity 2 **Read and write the length of objects.**

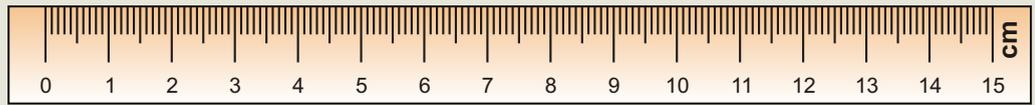
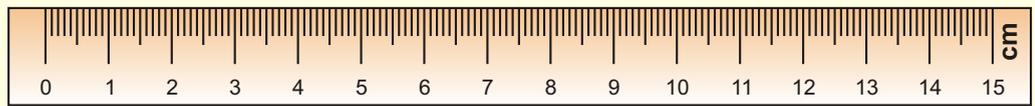
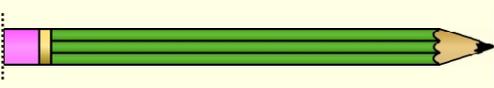
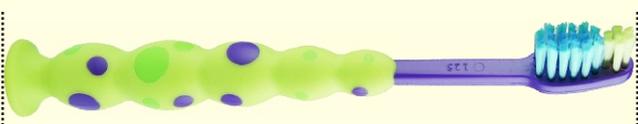
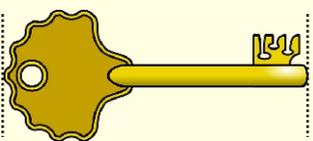
Length of table is 1m

1 m 1 m

m

cm

cm

## Exercise 50

**(A) Measure the length of objects and write it in centimetres:**

**(B) Measure length of the lines with scale:**

(1) 4cm

(2)

(3)

(4)

(5)

**Teacher's Note** Teacher should help the students to solve the exercise according to given scale.

## (C) Find the correct unit used to measure the following:

(1) The length of the table in your class [ ]

(2) The length of your Maths book [ ]

(3) The length of your pencil [ ]

(4) The length of your eraser [ ]

(5) The length of your class desk [ ]

## Solve real life problems involving measurements

**Activity** Whose length is greater?

## Exercise 51

**Tick (✓) the object greater than 1 m.**

(1) Length of school bus. [ ]

(2) Length of a book. [ ]

(3) Height of your classroom. [ ]

(4) Height of a glass of water. [ ]

(5) Measure of your own height. [ ]

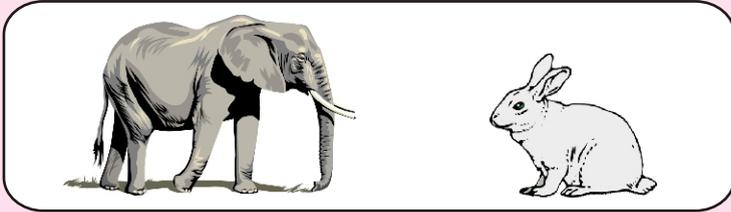
(6) Measure of your teacher's height. [ ]

(7) Length of a pencil. [ ]

# MEASUREMENT OF MASS / WEIGHT

## Recognize the standard units of mass/weight, i.e. kilogram, gram.

We have already learnt about heavier and lighter thing or objects in class I.

**Activity 1** Tick (✓) the heavier and cross (✗) the lighter.

The basic standard unit of weight is gram. We write "g" for a gram. There are 1000 grams in one kilogram.

**1 kilogram = 1000 gram**
*or*
**1kg = 1000 g**

There are some machines which are used to weigh things.

**Teacher's Note** Teacher should explain the concept of measurement of mass through real life experience of students.

## Read and write standard units of mass/weight including abbreviations

We use grams to measure light weight objects. Kilograms are used to weigh heavy objects. When we go for shopping, we see different weights in the shops.

**Activity** Tick (✓) the correct unit of weight:

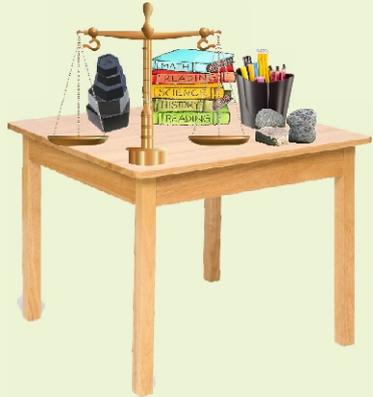
(1) An [orange] Weighs in g ✓ or kg

(2) A [goat] Weighs in kg or g

(3) A [lady finger] Weighs in g or kg

(4) A [watermelon] Weighs in kg or g

## Solve real life problems involving mass/weight

**Activity** Arrange a physical balance and weights of 100 g, 200 g, 500 g, 1 kg and 2 kg. Also collect stones, books, copies and some other material things. Teacher should help the students to measure these things by using different weights.

### Exercise 52

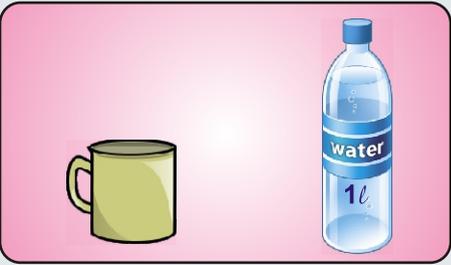
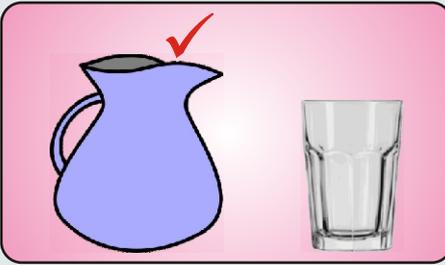
**Write appropriate unit of weight of the following objects:**

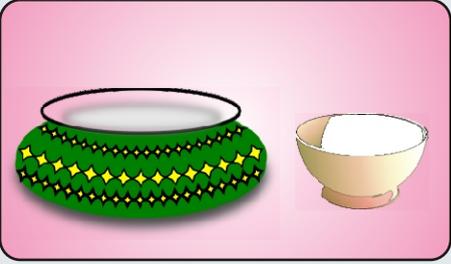
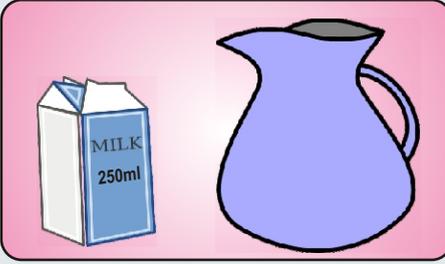
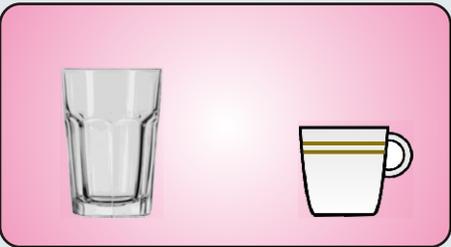
| | | |
|---|---|---|
| (1) | A boy | Kg |
| (2) | A goat | |
| (3) | A sugar bag | |
| (4) | A pencil | |
| (5) | A ring | |
| (6) | A chalk | |
| (7) | A hen | |

# MEASUREMENT OF CAPACITY

## Compare capacity of different objects (jug, glass, cup etc.)

Take a glass and a bottle. Fill the glass with water and pour into the bottle. We will see that there is some space life left in the bottle. It means the bottle can hold more water than the glass. In other words we can say that the capacity of the glass is less.

**Tick (✓) the container that holds more quantity:**

**Exercise 53**

**Tick (✓) the object that holds mor quantity and cross (✗) that holds less quantity.**

## Recognize, read and write standard units of capacity including abbreviations

Litre is the basic standard unit to measure capacity of the quantit liquid. We write " $\ell$ " for a litre and " $m\ell$ " for millilitre.

$$1\ell = 1000m\ell$$

Liquids such as milk oil, juice, petrol, etc. are measured in litres.

Here are some containers.

## Solve real life problems involving capacity/volume

In real life we bought milk, juice, oil and petrol in different quantities.

## Exercise 54

**(1)** My mother filled **4** cups of milk from **1** litre.

How much milk will be required to fill 8 cups? ______________

**(2)** Sara pours **3** glasses of juice from a bottle of **1** litre.
How much bottles of juice are required for 6 glasses.

**(3)** Ahmed pours **2** glasses of water from **1** litre jug?
How many glasses required to pours such two jugs?

**(4)** Which is the better for filling the full capacity of bucket?

**(1)**

**(2)**

Unit 4

# TIME

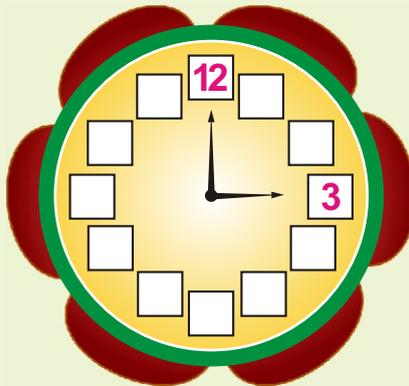
## TIME

### Know the number of hours in a day and number of minutes in an hour

Each day is divided into 24 equal, parts, each part is called an **hour**.

A clock tell us the time of the day. A day is divided into two equal halves of 12 hour clock. One half begins at midnight to noon (12 hours). The second half begins at12 noon and ends at midnight (12 hours).

**Analog clock**

**Activity** Write the correct numbers in boxes of the clock. Also write the time shown in the clock.

There are 24 hours in each day. The hours hand makes two complete rounds every day.

- **There are 60 minutes in an hour.**
- **There are 24 hours in a day.**
- **There are 7 days in a week.**
- **There are 4 weeks in a month.**

**Read and write the time from a clock in hours and minutes (with five minute intervals) e.g., read 8:15 as eight fifteen and 8:50 as eight fifty.**

**Look at this clock.**

The hour hand is pointing to 5. The minute hand is pointing to 12. At this position, the time is

5:00 *or* 5'O clock

A clock has two hands. The long hand is the minute hand. It takes five intervals to move between one number to the next number. It complete one round in 60 minutes or 1 hour.

The short hand is the hour hand. It makes a complete round the clock in every hour 12 to 1, 1 to 2, 2 to 3, 3 to 4 and back to 12.

It makes a complete round the clock in every twelve hours.

## We read and write the time as:

**Exercise 55**

**Read and write the time in the given boxes.**

Four five

4:05

Eleven twenty five

11:25

Three ten

:

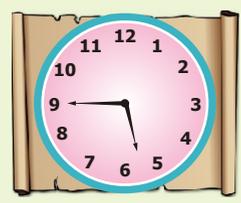
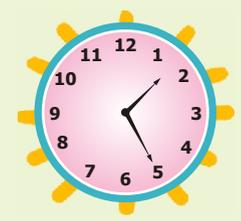
Six fifteen

:

Eight thirty five

:

______ ______ ______

: : :

**Teacher's Note** Teacher should bring a clock in the classroom and move its hands at different positions to show time.

## 1. Half past

The minute hand is at **6**.
The minute hand has moved half a circle from **12** to **6**.
The time is **half past three**
*or* write as **3:30**

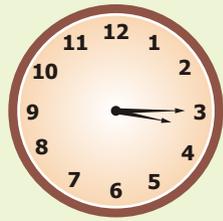
## 2. Quarter past

Here, the minute hand points to **3**.
The hour hand has moved a little bit from **5** towards **6**. The minute hand has moved a quarter of a circle from **12** to **3**.
We read, **it is quarter past 5** *or* write as **5:15**

## 3. Quarter to

Here the minute hand points to **9**.
The hour hand is almost at **8**.
The minute hand has moved three quarters from **12** towards **9**.
We say that, **it is a quarter hour left to eight.**
*or* write as **7:45**

## Exercise 56

## Write time below each clock.

| | | | |
|---|---|---|---|
| 2'O clock | ____'O clock | Quarter past 3 | Quarter past____ |
| or 2:00 | or | or 3:15 | or |
| Half past 3 | Half past______ | Quarter to 4 | Quarter to______ |
| or 3:30 | or | or 3:45 | or |

## Recognize a.m. and p.m

There are 24 hours in a day. We can say:

**12'O clock** *or* 12:00

Time of morning is written as a.m. It starts from midnight and ends at Noon (12 hours).

Time of afternoon is written as p.m. It starts from Noon and ends at midnight (12 hours).

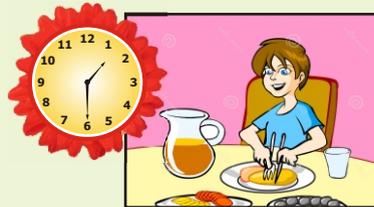
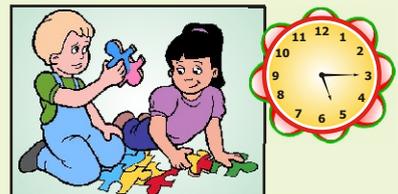
12:00 noon

6:00 p.m

**Write a.m or p.m.**

- Sunny takes his breakfast at 7:00 ________

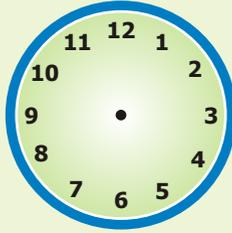
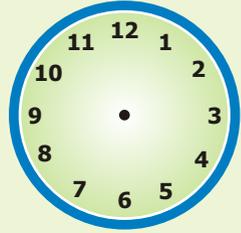
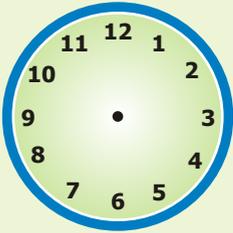
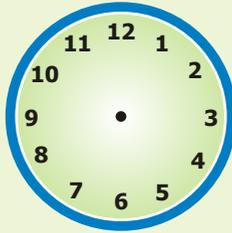
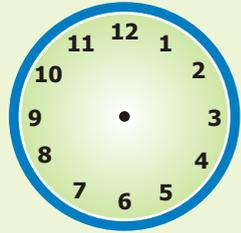
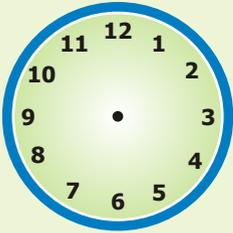
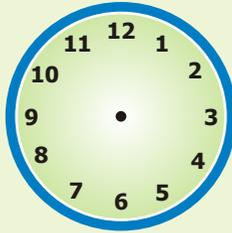
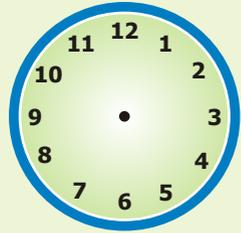
- Bilal and Maria go to school at 7:45 ________

- Nasir takes his lunch at 1:30 ________

- Azam and Fouzia play at 5:15 ________

- Salman goes to bed at 10:00 ________

## Draw hands of a clock to show time in hours and minutes (with five minute intervals)

### Exercise 57

Draw hands of clock to show the time in hours and minutes, also write.

five thirty five

**Teacher's Note** Teacher should help the students to use sticks of match box for showing time in each clock.

## Use solar calendar to find a particular date

**Calendar**

There are two types of calendars used in Pakistan.

**(1) Solar Calendar** **(2) Lunar Calendar**

Each of them has 12 months.

**Activity** **Put the months of solar calendar in order.**

| | | |
|---|---|---|
| JULY | DECEMBER | APRIL |
| MARCH | SEPTEMBER | NOVEMBER |
| JANUARY | MAY | AUGUST |
| FEBRUARY | OCTOBER | JUNE |

| | | | |
|---|---|---|---|
| 1st | January | 2nd | |
| 3rd | | 4th | |
| 5th | | 6th | |
| 7th | | 8th | |
| 9th | | 10th | |
| 11th | | 12th | |

## Model Solar Calendar

**JANUARY**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | * | * |

**FEBRUARY**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | * | * | * | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | * | * |

**MARCH**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 31 | * | * | * | * | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

**APRIL**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | * | * | * | * |

**MAY**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | * | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | * |

**JUNE**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 30 | * | * | * | * | * | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

**JULY**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | * | * | * |

**AUGUST**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | * | * | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

**SEPTEMBER**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | * | * | * |  | * |

**OCTOBER**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | * | * |

**NOVEMBER**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | * | * | * | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

**DECEMBER**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | * | * |  | * |

## Exercise 58

**Answer the following questions orally according to the above Solar Calendar:**

1. What is the day on your birthday? ____________________
2. On which date will we celebrate Independence day? ________
3. What date is on first Friday in the month of May? ________
4. What day is March 23rd? ____________________
5. What day of the week does December start on? ________

## Use lunar calendar to find a particular date

- It is also called the Hijra calendar, as it is related to the event of the migration made by Prophet Muhammad (P.B.U.H) from Makkah to Madina.
- There are 29 or 30 days in a lunar month depending upon the appearance of new moon.
- Lunar month's date changes from sunset of one day before till sunset of next day.

### Name of Months in Lunar Calendar

| | | |
|---|---|---|
| 1. MUHARRAM | 2. SAFAR | 3. RABI-UL-AWWAL |
| 4. RABI-UL-SANI | 5.JAMADI-UL-AWWAL | 6. JAMADI-UL-SANI |
| 7. RAJAB | 8. SHABAN | 9. RAMZAN |
| 10. SHAWWAL | 11. ZIL QUAD | 12. ZIL HAJ |

### Answer the following questions orally:

1. Identify the first month of Islamic year.
2. In which month Muslims fast?
3. Which is the last month of Islamic year?
4. In which month Muslims celebrated Eid-ul-Azha?

**Teacher's Note** Teacher should tell the students the name of the months of lunar calendar and help them to answers of given activity.

## Model Lunar Calendar

**MUHARRAM**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 30 | * | * | * | * | * | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

**SAFAR**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | * | * | * | * | * |

**RABI-UL-AWWAL**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | * | * | * |

**RABI-UL-SANI**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | * | * | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | * | * |

**JAMADI-UL-AWWAL**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 30 | * | * | * | * | * | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

**JAMADI-UL-SANI**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | * | * | * | * | * |

**RAJAB**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | * | * | * |

**SHABAN**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | * | * | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | * | * |

**RAMZAN**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 30 | * | * | * | * | * | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

**SHAWWAL**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | * | * | * | * | * |

**ZILQUAD**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | * | * | * |

**ZIL HAJJ**

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| * | * | * | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | * | * | * |

## Exercise 59

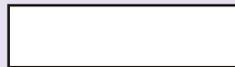
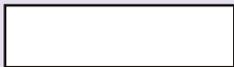
**Answer the following questions orally:**

1. What day is Rajab 27th?
2. What is the day before 10th Muharram?
3. What is the day after 5th Zilquad?
4. On which date Muslims perform Hajj?
5. What is the date of Eid Melad-ul-Nabi (P.B.U.H)?
6. Which is the first month of Lunar Calendar?
7. Which month comes after Shaban?

## TWO-DIMENSIONAL FIGURES

### Identify the figures like square, rectangle, circle, semi-circle and quarter-circle

We have already learnt the basic geometrical shapes in class I.

**Activity 1** Write the name of geometrical shape shown in each object.

**Activity 2** Cut paper into circular shape.

Circle

Fold it into 2 equal parts.

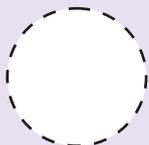
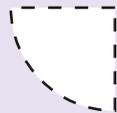
We get two half circles. Each half circle is called a **semi-circle**.

Semi-Circle
Semi-Circle

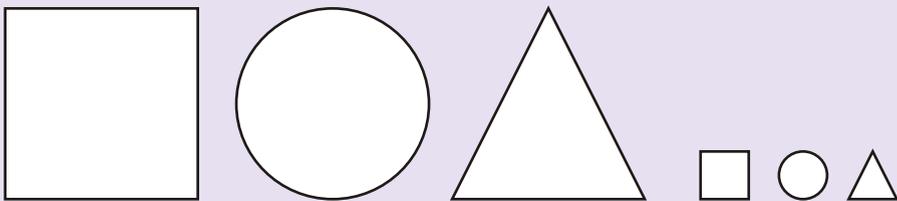
When a circle is divided in four equal parts, we get four **quarter-circle**.

Quarter Circle | Quarter Circle
Quarter Circle | Quarter Circle

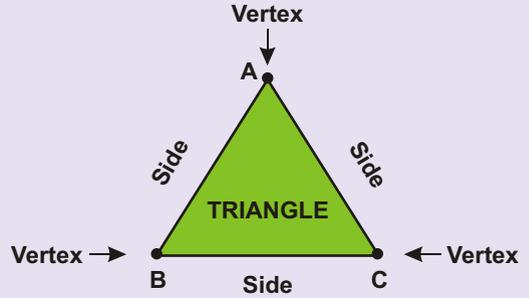
## Exercise 60

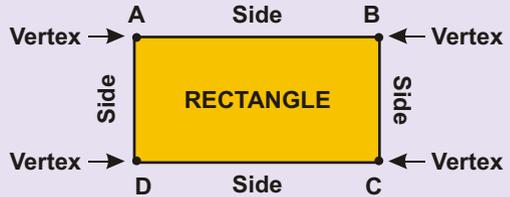
(1) Join dots and write the names of the shapes.

(2) Tick and name the figure on the right that looks like the figure on the left.

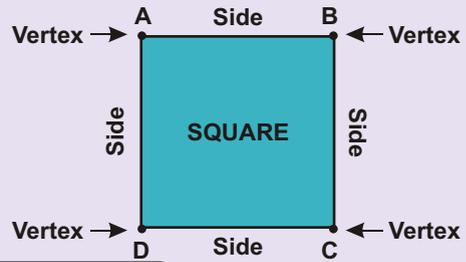
RECTANGLE ✓

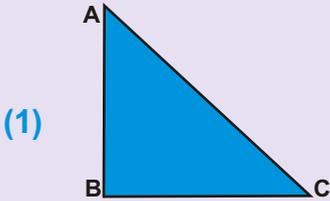
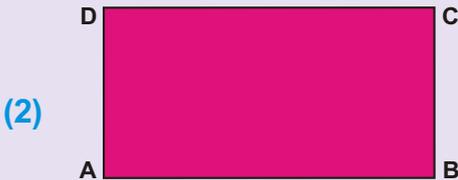
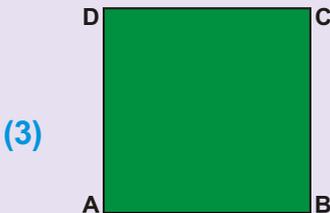
(3) By putting small shapes inside the large shape, how many figures can be made?

## Identify vertices and sides of a triangle, rectangle and square

### TRIANGLE

Triangle has three sides and three vertices.

### RECTANGLE

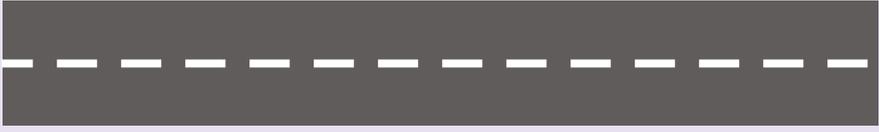
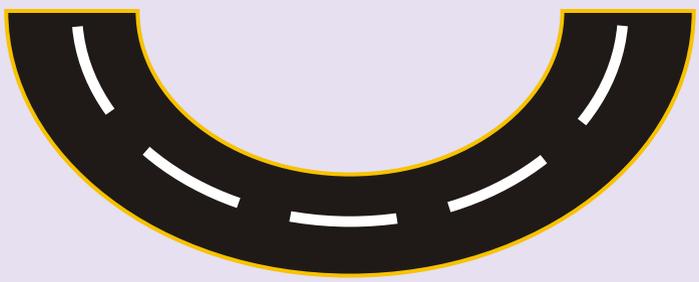
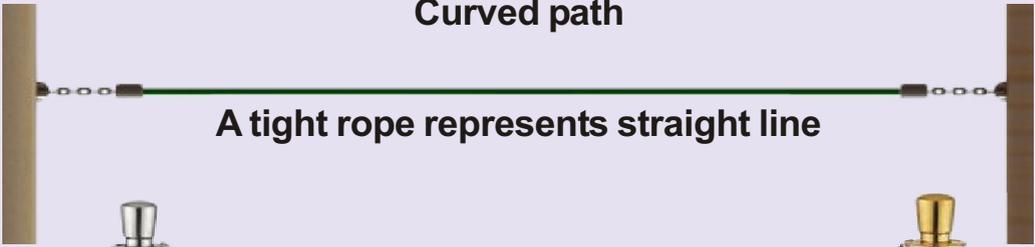
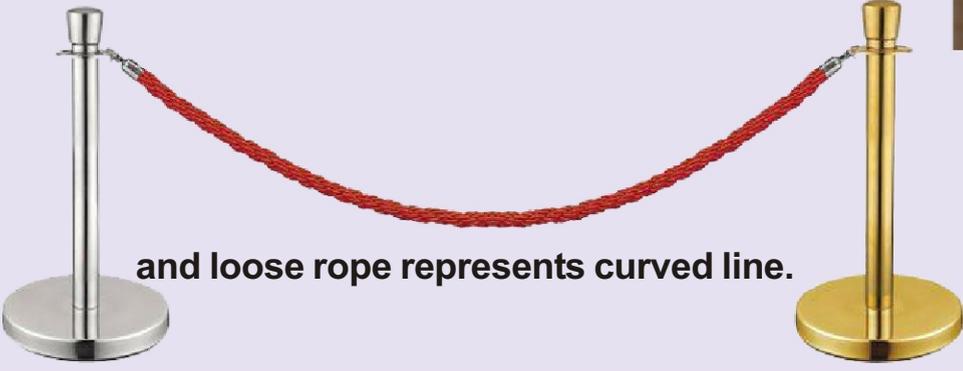
Rectangle has four sides and four vertices.

### SQUARE

Square has four sides and four vertices.

**Exercise 61**

**Write number of sides and vertices.**

(1) It is a Triangle. It has ______ sides and ______ vertices.

(2) It is a ______. It has ______ sides and ______ vertices.

(3) It is a ______. It has ______ sides and ______ vertices.

## LINES AND CURVES

### Differentiate between a straight line and a curved line

**Straight path**

**Curved path**

**A tight rope represents straight line**

**and loose rope represents curved line.**

A **This is a straight line.** B

**This is a curved line.**

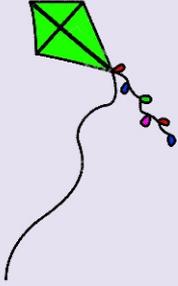
**Teacher's Note**

Teacher should explain straight and curved lines and also use other materials for providing exercise.

## Exercise 62

**Tick (✓) the shapes representing straight line and cross (✗) the shapes of curved line.**

(1) Movement of snake  

(2) Loose position of string  

(3) Edge of a door  

(4) Edge of a blackboard  

(5) Railway line  

(6) Coil

## Identification of straight and curved lines:

**Activity 1** Tick the correct shape of given line drawings.

(1)
☑ Straight Line
☐ Curved Line

(2)
☐ Straight Line
☑ Curved Line

(3)
☐ Straight Line
☐ Curved Line

(4)
☐ Straight Line
☐ Curved Line

(5)
☐ Straight Line
☐ Curved Line

(6)
☐ Straight Line
☐ Curved Line

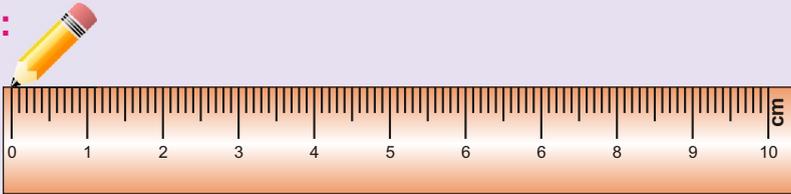
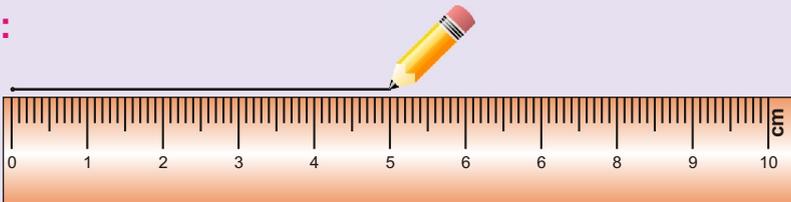
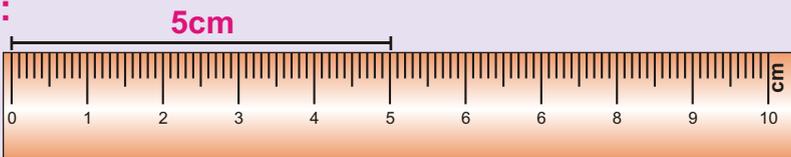
### Exercise 63

**Write how many straight and curved lines are given in the following figures.**

(1) (2) (3)

## Use straightedge/ruler to draw a straight line of given length (exclude fractional lengths)

Aamir draws a straight line of 5 cm by using a ruler.

**Step 1:**

**Step 2:**

**Step 3:**

## Exercise 64

**(1)** **Draw straight lines of following lengths with the help of ruler.**

| | | |
|---|---|---|
| (1) 4 cm | (2) 6 cm | (3) 2 cm |
| (4) 3 cm | (5) 9 cm | (6) 7 cm |

**(2)** **Hina is drawing a straights line of 8 cm. Shafia is drawing another line of 9 cm. Show it practically whose line is smaller in length?**

**Teacher's Note** Teacher should help the students to draw straight lines of different measurements to provide the practice of drawing lines.